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# BOARDWATCH MAGAZINE

*ELECTRONIC BBS AND ON-LINE INFORMATION SERVICES*

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**JOHN DVORAK - CONNECTED TO A WORLD OF PCs**

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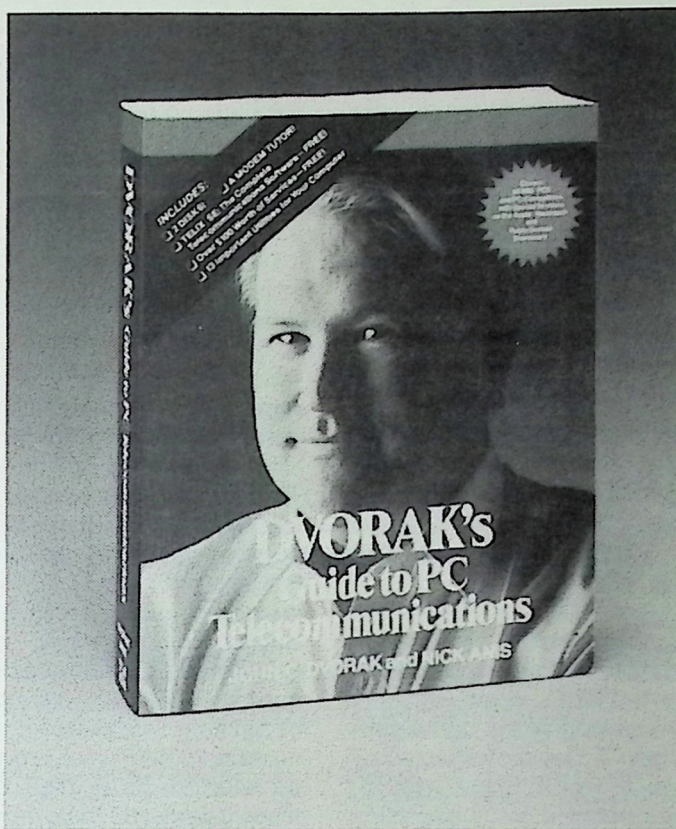
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He still does his **INSIDE TRACK** column - now in PC Magazine - and in reality, while the computers have come a long way and the magazines look a good deal more polished, he's still a welcome relief from dry product reviews and product announcements - a lot of changes in the computer industry - less so in the magazines. We were pleased to note a positive reference to Boardwatch in his column recently. And



The response was overwhelming. Some 10,000 calls to their BBS from all over the country. And the resulting book is overwhelming too. They essentially recruited the top minds in each of twenty-

There really hasn't been anything definitive on PC Telecommunications printed. Dvorak and Anis believe that telecommunications has been the orphaned child of the computer industry. They're both personally enthusiastic about PC telecommunications and wanted a book that would cover the subject exhaustively and perhaps raise the consciousness of the computer industry in general. Glossbrenner has done a few good titles on shareware and using CompuServe. Bowen and Payton did a little book on using RBBS to set up a system. And Michael Banks had done a

Modem Reference book. But that is about the extent of the literature available on the subject and telecomputing remains largely the dark house of PC applications. Everyone knows it exists but to many it is shrouded in a veil of mumbo jumbo concerning bits, bauds, and initialization strings. And no real encyclopedic guide to the subject existed. It does now - and it's no laptop version.

Osborne McGraw-Hill is pretty proud of the book at \$49.95 - a little over \$13 per pound. But if you're accustomed to hanging around computer book stores, you'll likely not find that too shocking since almost all the books seem to be making the trip for around \$30 or better these days. And this tome has a few things going for it.

For one, it comes with two tightly compressed disks of software. Colin Sampalaneu's **TELIX** communication program is included along with a slew of utilities you'll find useful including **PKZIP** which you'll likely need to **UNZIP** compressed program files found on BBS systems and **QEDIT** probably one of the best little text editors available. The included Telix version is **NOT** shareware. You own it outright as purchaser of the book. The **SEALink** and **KERMIT** protocols have been deleted in this special version and the script compiler, a notable feature of Telix, was omitted. On the other hand, it comes with several ready-made scripts for the major online services. And it has been trimmed down in physical size to be probably the smallest full-featured communications package available anywhere. ZModem protocol was included.

Most notably, it includes a program titled **DOORWAY** by Marshall Dudley that works with Telix to provide a remote operation capability akin to the **PC ANYWHERE** and **CARBON COPY** commercial programs. You can actually set Telix/Doorway up on your home computer, dial it from another city, and operate your computer to move files about, run programs and utilities, and generally muck about as if you were there.

Nick Anis did a program titled **MODEM TUTOR** that provides a tremendous number of little tricks and

tips to get started using a modem to explore online information services and BBS. It even includes the ANSI logon screens from a couple of dozen popular BBS around the country. The program itself offers a stunning ANSI color graphics display with sliding menu bars and so forth and at times it simulates being online so closely you may forget it's a program. For modem novices, this program more than anything else can show you some of the things about BBS that are not very well explained elsewhere and help you get started with some degree of confidence before you ever fire up the modem.

This book is more of an organizational tour de force than literary masterpiece. Sections on Compuserve, GENie, and Prodigy were reviewed by those services with a fine-toothed comb. Jim Button did the section on shareware software. Jim Button wrote **PC FILE** most notably among others and was one of the very first pioneers of shareware marketing. While pioneers usually wind up with arrows in their back, Button made it work and today has a multi million dollar operation with perhaps fifteen employees - and he's still selling an excellent database program in **PC FILE** - and he's still doing it by shareware.

A chapter on recommended shareware was aided by a gentleman named Mike Callahan AKA Dr. File Finder. This guy is the Johnny Appleseed of shareware. He goes around the country promoting shareware for the authors - free. Just likes the concept and is out to help.

Modem manufacturers, including US Robotics, Multitech, and Telebit, contributed to sections explaining modem communications and modulation techniques. BBS software authors contributed pieces on BBS software and file transfer protocols. Scott Watkins, author of the Macintosh BBS program **RED RYDER HOST** contributed heavily to the Macintosh chapter. This chapter alone may become the definitive work on Macintosh communications - a subject on which virtually **NOTHING** has been written. And so it went.

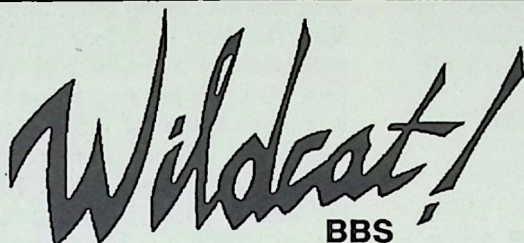
The Dvorak name opened a lot of secret little industry doors that ordinarily would not be open to an author. And

Dvorak and Anis obviously did more than compile input from others. The finished product is polished from beginning to end in a direct, readable style. The style and format of each chapter is surprisingly uniform and usable - unexpectedly so for a manual with so many sources. The Dvorak editorial hand is evident throughout and we are told that all material went through three technical reviews. Dvorak and Anis actually set up many of the BBS systems described in the book.

Best of all, the book manages to serve two masters with reasonable aplomb. It serves as an excellent introduction to the complete beginner, and at the same time also fills the bill as a good handy reference for the expert. We're still learning some things we didn't know about international dialing, the coming Integrated Services Digital Network (ISDN) and modem modulation techniques (a kind of electronic voodoo done with dolls and potions under the flickering light of an LED. The object is to develop a technique for getting 12 pounds of potatoes into a 10-pound sack and then sending it through a 1/2-inch water pipe).

The 1200 pages and two diskettes are augmented by a slew of tear-out cards in the back of the book. These cards offer dramatic discounts and free samples totalling about \$1500 - simply mail off the cards to get the offer. DataStorm offers a free **PROCOMM** T-Shirt. Peter Norton computing is offering a discount on a new version of **NORTON COMMANDER**. The new version features a null-modem communications function similar to Travelling Software's **LAPLINK** but operating from the popular Norton Commander DOS shell. I wouldn't buy the book for the T-shirt - but on the other hand I've got to mow the lawn in something and it's free.

The project required a special team of nearly 25 people at Osborne McGraw-Hill to put together and by industry standards it is a whopper - read production nightmare. It is probably the most expensive production of a computer book to date. And with a rumored initial print run of 35,000 copies, somebody is convinced this book is headed for blockbuster status in the marketplace. We're going to guess yes.



"WILDCAT! 2.0 lives up to its name — its fast."

"...this is the way its supposed to be done."

John C. Dvorak

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Doors, single and multi-line — 50 file batch download — 200 file batch upload — Internal true Ymodem & Ymodem/G — Text, color, & dynamic menus — "Hot-key" menu execution — 1.5 second access to any user, file, or message — Up to 250 nodes — Full LAN support — DESQview aware — File & record locking — TSR network monitor — Inter-node chat — Bulletproof security — 300-38,400 baud with throughput of 1600 CPS at 9600 locked — 16550A UART support with FIFO — Multiple questionnaires — NET/ECHO mail connections

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The book is quixotically dedicated to **ALL MANKIND**. Interesting little inside sidebar here. It seems that a number of software developers have given up on copy protection. Instead, they've taken to putting little installation routines that require you to enter your name. Whenever the program is run, it displays something like **THIS PROGRAM REGISTERED TO name OF xyz corporation. ONLY name xyz corporation IS AUTHORIZED TO USE THIS COPY OF XXX SOFTWARE**. A kind of anti-piracy by humiliation technique. Ever the cynic, Dvorak has taken to entering **ALL MANKIND** as the name and **THE WHOLE WORLD OVER** as the organization on his copies - and so the dedication to the book.

Dvorak's Guide should establish a new genre of computer books - he calls them "Fat Books With Disks". Essentially large, comprehensive computer books with software, templates, macros, or whatever included. Many small programs/utilities don't bear the expense requisite to bring a software title

to market conventionally by themselves, but by packaging them with a book, they can be marketed effectively and many are useful.

**Dvorak's Guide to PC Telecommunications** can be obtained directly from the publisher at **\$49.95**. It's pricey, but packed with more value than they're asking and virtually the only encyclopedic and current source on connecting your PC to the world-wide computer. Our highest recommendation. Osborne McGraw-Hill, 2600 10th Street, Berkeley, CA 94710; (800)227-0900. Dvorak and Anis can be reached via their Computer Business Service BBS at (714)396-0014.

#### **FAST ERASABLE OPTICAL DRIVE AVAILABLE**

Storage Dimensions, a subsidiary of Maxtor, is releasing a **928 MB** erasable-optical drive unit scheduled for shipment during the week following Thanksgiving. The unit features **48.6 ms** average access and **35 ms** average

seek times which puts it in league with the slower hard disk drive technologies. Transfer rates average about **10 Maps**.

The LaserStor Erasable Optical Subsystem is one of the first true read-write optical devices to hit the market and would appear in use as a very large, slightly slow hard disk. But it uses a removable optical media. The **928 MB** formatted capacity cartridge is **\$395** while a smaller **590 MB** cartridge is **\$295**.

While the capacities are enormous, the cartridges are actually double sided and the LaserStor has but a single read/write head. As a result, only half the capacity is available at any one time. The **928 MB** cartridge provides **464 MB** per side while the **590 MB** cartridge stores **295 MB** per side. To use the other side of the disk, you actually remove the cartridge and flip it over.

Previously, devices termed erasable-optical allowed you to write to them until full. Then, you could erase the whole disk and start over. But because the Storage Dimensions unit can erase and overwrite individual sectors, it appears

to be a true read/write device. Actually a magnetic-optical device, the unit first erases the sector by reversing the magnetic field and "writing" with the laser to reverse the domains within the optical material. A second "write" pass to lay down data reverses the magnetic field again and pulses the laser to write individual bits to the disk. In this way, the reflectivity of the optical media can be varied to carry data.

The system comes complete with an external case, cables, Small Computer Systems Interface (SCSI - pronounced scuzzy) circuit card, software drivers, and installation instructions, and the 928 MB cartridge for \$7995. It appears to your DOS-based computer for all the world as a large, slightly slow, hard disk drive.

The combination of large capacity, removable media, and the durability of optical media makes this unit a sure winner for online service providers. According to Storage Dimensions, they have 80 units on hand with another 100 expected by the end of the year and firm orders for 50 units already received.

Contact Mark Burnside, Storage Dimensions, 2145 Hamilton Ave., San Jose, CA 95125; (408)879-0300.

#### **MINITEL SERVICES COMPANY ADDS SPORTS AND STOCK INFORMATION**

Minitel Services Company has announced the addition of Montreal-based Exchange Market Systems, Inc. (E.M.S.) as an information provider on it's global interactive electronic communications network. The company will offer detailed information from all of North America's 34 existing stock exchanges including 15-minute delayed quotations on over 65,000 stocks, options, currencies, commodities, precious metals, and gems. The service is titled *Telequote*.

E.M.S. also brings *Computer Sports World* to Minitel. This San Francisco Daily Chronicle service provides game scores, schedules, statistics, injuries, line-ups, and weather for basketball, hockey, football, and baseball along with Las Vegas and Atlantic City line odds. The services are available at \$0.17 per minute through approximately 160

local exchanges. Minitel Services Company, 2900 Westchester Ave., Suite 101, Purchase, NY 10577; (914)694-6266.

#### **SUPER SLIM LAPTOP HARD DISK DUE**

Areal Technology of San Jose California is introducing a 50 MB 2.5-inch hard disk drive featuring a single glass-media platter. The units are extremely lightweight, low power devices. Most notably, the single-platter design allows an overall height of just 17 millimeters - about 0.7 inch. The combination of small size and weight with low power consumption is ideal for laptop computers. Look for more powerful lap tops with larger hard disk capacities in the future. Areal claims they'll ship December of this year. Areal Technology, Inc., 2890 N. 1st St., San Jose, CA 95131; (408)954-0360.

#### **WEIGHT CALCULATOR FOR CAD**

Dempsey's Forge Software of Gladys Virginia has released a mass and volume calculation program titled *Mass2* to calculate the weight of an object given it's shape, size, and type of material. The program contains a database of over 700 materials including metals, construction material, plastics, gases, and so forth. In addition to calculating weight and mass, the program will also indicate center of gravity. Probably a handy utility for CAD users and reasonably priced at \$69. Dempsey's Forge, Software Division, Rt. 2, Box 407, Gladys, VA 24554; (804)283-4602.

#### **MULTILINE FAX**

GammaLink is introducing a fax board for the IBM PS/2 Micro Channel titled the GammaFax CP. As many as eight of these boards can be installed in a single PC to handle multiline fax operations. The boards are \$1195 each. GammaLink, 2452 Embarcadero Way, Palo Alto, CA 94303; (415)856-7421.

#### **V.32 MODEM STANDARD MAY BE EXTENDED.**

The Comite Consultatif Internationale de Telegraphique et Telephonique (CCITT) is the international body establishing standards for modem com-

munications among other things. Their V.32 standard describes modem communications at 9600 bps (bits-per-second) and is just now being commonly implemented by modem manufacturers. But modem developers such as US Robotics, Telebit, and Microcom are already selling units that communicate at 14,400 bps and even as high as 19,200 bps over dial-up lines. The problem is that without a CCITT standard, they can't connect with each other at those rates - only between modems of the same model.

According to Dick Brandt, chairman of the CCITT Study Group XVII's Working Party No. 1, which deals with modem issues, a 14,400 bps version of V.32 is under consideration. It would be known as V.32bis (bis meaning extended). There is precedent for this. The V.22 standard describes 1200 bps operation while V.22bis describes 2400 bps operation. There have even been some discussions of a 19,200 implementation of V.32.

#### **MOTOROLA POCKET CELLULAR PHONE**

Motorola has introduced the smallest cellular telephone built to date. The Personal Cellular Telephone uses a special VLSI integrated chip set to produce a telephone that weighs only 10.7 ounces and measures only 13.5 cubic inches with an optional slim battery. It provides continuous talk time of up to 30 minutes with the slim battery. Using the normal battery, the unit weighs 12.3 ounces measuring 15.8 cubic inches and supports up to 75 minutes continuous operation. A charger unit recharges batteries in less than an hour. The unit folds up into a wallet-sized package that slips into your sports coat with room to spare. Price? A stratospheric \$3000. Available from SkyCell Telephone Sales, Highway 68 West, Springdale, AR 72764; (501)751-7311.

#### **TINY POQET PC**

Poquet Computer Corp. of Sunnyvale CA has introduced a tiny IBM PC compatible unit only 8.75 X 4.3 X 0.925-inches in size - about the size of a VHS video cassette. The unit features a 7-inch monochrome 80 X 24 display, 77-

key keyboard, 512KB of RAM and ostensibly runs for 100 hours on two ordinary AA alkaline batteries.

Storage is provided by credit-card sized RAM or ROM cards. The unit features an Intel 80C88 microprocessor running at 7 MHz and some built in application programs including a calculator, text editor, scheduler and address book, file manager and transfer program, and a modem communications package. A special bus connector cable allows RS-232C serial connections for an external modem.

The unit makes the trip for a \$2000 and the memory cards are especially proud at \$500-\$600 for a 512KB RAM card. Poqet Computer Corp., 650 North Mary Ave., Sunnyvale, CA 94086; (408)737-8100.

### **PACIFIC BELL DROPS GATEWAY PLANS**

In a surprise announcement, officials of the Pacific Bell Telephone Company acknowledged they were dropping plans for their California Online videotext gateway system already several years in the planning. Pacific Bell is the first Regional Bell Operating Company to officially announce plans to drop videotext although Nynex, Bell South, Bell Atlantic, and Southwestern Bell have all been strangely quiet about the relative success of their gateway offerings.

Pacific Bell spokesmen indicated that their market research was not encouraging concerning the number of potential users and information providers for the system. Specifically, they felt they were "unable to provide the features, support and value necessary to make California Online a successful service."

The Nynex gateway was recently rumored to be in serious trouble with but 150 calls in its first month of operation, although the initial period was largely limited to families of Nynex employees. Many small, amateur BBS receive that many calls in a single day.

Southwestern Bell, after triumphant opening announcements trumpeting "thousands" of callers to their Source-Line Service, has been notably quiet about current success of the gateway.

But they have begun a startlingly vicious campaign against local BBS system operators. In many cases, tiny hobby BBS in Texas have had to close down rather than pay the much higher business rates Southwestern Bell claims is owed them for providing telephone access to these services.

But according to Southwestern Bell spokesman Steve Hilgeman, Source-Line is doing great with nearly 300 information providers and 16,000 customers. When questioned on what constitutes a customer, Hilgeman indicated that those who they had sent terminals or PC software were counted as customers. And currently, 70% of the 16,000 have received free Minitel terminals. We asked Mr. Hilgeman if they had any data on actual activity such as calls per day or calls per month. He noted that they considered such information proprietary because of the cost of gathering it (????) but that they were "pleased" with the current activity and particularly the large number of information providers. This begins to sound like the only significant income the Bells are deriving from the gateways is from the information providers themselves.

BellSouth, after an initial blast touting their TUG online offering, has been strangely quiet. And Chicago's Ameritech had decided months ago to skip the online service market altogether.

Other rumblings indicate that some RBOC are actually considering proposals to charge BBS and online information services based on a measured service type arrangement whereby the BBS is charged for INCOMING calls. Apparently there is some sentiment among the Baby Bells that if you can't compete with BBS, perhaps you can tariff some money out of them directly. Unfortunately, it's a bit difficult to bleed blood from a stone and such action would likely spell the demise of local bulletin boards.

If the Bells can't persuade the general public to pay their online rates using their own available marketing muscle, it is a mystery to us how they figure they can do it riding on the back of some clown in a garage running an old 8088

PC to trade files with his PC user group. A genuine dog in the manger approach to modern data communications.

US West was scheduled to bring their gateway service, CommunityLink, up in Omaha Nebraska this past October 12. According to Ron Dulles, US West spokesman for the project, they intend to delay the entry to November 20 to complete some extended testing. US West has 63 information providers fielding nearly 150 different services on the CommunityLink gateway. According to Dulles, they too expect the majority of the user base to use the Philips M2 terminals.

### **WILDCAT PRO-PAK SUPPORT PACKAGE**

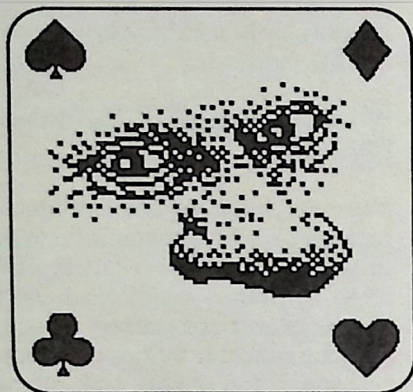
Mustang Software has introduced a package of utility programs for Wildcat system operators they call the PRO-PAK. S-PRO is a statistical analyzer used to extract and summarize activity from the system activity log and actually creates bar graphs and summary screens operators can use to monitor system usage. F-PRO is a file database manager making maintenance of software download libraries easier. Q-PRO creates percentage statistics and graphs from caller responses to survey questionnaires. The M-PRO utility provides a means to easily list, renumber, edit, and delete messages. And U-PRO allows operators to manage the user log listing. Each utility is priced at \$25 or the entire package is available at \$99. Mustang Software maintains a product support BBS at (805)395-0650. Mustang Software, Inc., 3125 19th St., Suite 162, Bakersfield, CA 93301; (805)395-0223.

### **US SPRINT OFFERS BBS FOR TELECOM CONSULTANTS**

US Sprint has set up an information database for telecommunications consultants titled SPRINT FACTS. The service is available via Telenet at no charge to qualified consultants in the industry. Essentially, it is designed to provide a ready reference to US Sprint offerings and pricing schedules for use when quoting systems based on US Sprint products.

# Ready for some adult fun?

**Let your modem heat up now!**



Looking for something exciting, hot and different? How about trying The "Other" Ball, California's fastest growing adult (over 21) BBS alternative, where you can meet friends, relax, and have fun.

Our 24 line chat link-up allows you to talk live to other adults of similar backgrounds, interests and persuasions. It can be in open public groups, private groups, or one-on-one for that "special encounter".

For those interested in other forms of gaming, we offer "live" poker and blackjack against other players in the most realistic computer casino in town. Other on-line games, including Flash Attack, California's newest rage, are here.

Our system allows you the opportunity to experience a wide variety of interesting adult and general interest message areas, read on-line magazines, download software for immediate use, or browse through our extensive classified sections for that special deal. We have over 200 megs of software in our libraries, with one of the largest adult picture collections in the West, offering full support for IBM, Apple, Mac, Commodore, and Atari users.

The alternative BBS. Where adults come to play.

**The "Other" Ball, a member of the U.S. Link BBS System.  
(818) 358-6968.**

300 through 2400 baud 8/N/1

The system operates as a subset of Telenet's Telemail system. After entering **MAIL** and a user name and password, you'll see the **FACTS** Main Menu. A **NEWSFLASH** segment alerts you to any changes in Sprint products. A database of product descriptions and prices is available for both US Sprint and Telenet. An automated rate analysis spreadsheet model is available for download.

Most interesting is a daily industry news feature summarized from a dozen industry newsletters and more than thirty newspapers and magazines. An E-Mail function is provided as well as a directory of telecommunications consultants from around the country. For more information on gaining access to this service, call (800)USS-FACT. Sprint, incidentally, is completely absorbing Telenet between now and the first of the year. Telenet's Telemail service will be renamed **SPRINTMAIL** and the Telenet name and logo will gradually fade to oblivion.

## LONG DISTANCE PROFITS UP

Both AT&T and MCI, the nations two largest long distance carriers, report dramatically increasing profit margins despite dramatically decreasing long distance rates. For the quarter ending September 30, MCI reported earnings of \$158 million, up nearly 60% from the \$99 million for the same quarter last year. Revenues of \$1.67 billion for the quarter were up only 23%, reflecting lower dialing rates but increased usage while operating costs, despite the increased traffic, actually fell somewhat dramatically.

AT&T reported profits of \$699 million on revenues of \$8.896 billion. Again, profits were up 20% while revenues only increased by a slim 1% on a 5% increase in calling volumes.

This brings up an interesting question. If long distance carriers can handle more calls, at lower rates, and at even more dramatically lower costs, what is going on with the local regional Bell operating companies? The advances in switch technology, office productivity, and so on that contribute to the dramatic

decrease in long distance costs are pretty much directly reflected in the operation of local telephone companies switching local calls as well. Yet, for some reason, they have hesitated to stampede the local PUC bodies to request rate **DECREASES** for subscribers.

The development of competition in the long distance marketplace while retaining the "natural monopoly" operating scenario in the local areas provides a dramatic comparison of these two systems virtually side-by-side. Clearly, for the consumer, competition is an enormous advantage. The FCC is currently considering an RBOC funded "independent" study recommending that the RBOC be allowed to carry cable TV over telephone circuits. We think it is time to take a look at the other side of the coin, competition in local calling areas. Let the cable TV, electric companies, and anybody else with a wire truck and a better idea compete with the RBOC for your local telephone dollar.

## NEXT RUMORS

Recall from a recent issue our prediction of a NeXT TO computer? We had described a "little brother" to Steve Jobs elegant NeXT offering. Well, it appears to be happening. Businessland is talking of a smaller version of the NeXT computer that forgoes the 256 MB optical drive in favor of a fast 19 ms 40 MB hard disk with some hot disk caching algorithms that make it appear very quick off the mark. The unit will be marketed by Businessland for \$7999 - considerably above our prediction on price. Interestingly, NeXT is continuing their educational offering at a much reduced price from Businessland. The new machine will make the trip for \$4999 through schools. Even more impressive, existing NeXT owners will get the 40 MB drive FREE. That's support.

NeXT is also introducing a BIG brother to NeXT that they are calling a file server. The unit contains 16 MB of RAM, the existing 256 MB optical drive, and a 660 MB hard disk. It is scheduled to make the trip from them to you at \$19,500 through Businessland or via schools for \$11,600. This new lineup contains all the elements for a NeXT Unix office network.

But NeXT is also going after the Government Services Administration schedule with a unit that combines BOTH the optical drive and new hard drive at a price of \$8,183. And, they are looking at providing a COLOR display for NeXT while retaining the current million-pixel resolution. If you haven't seen this box yet, you're missing a peek at your computing future. NeXT, Inc., 3475 Deer Creek Road, Palo Alto, CA 94304; (415)424-8500.

## WILDCAT 2.1 ADDS LAN SUPPORT

Mustang Software Inc. has introduced version 2.1 of their popular BBS software package to run on LANs supporting up to 250 telephone lines/LAN connections. The product provides LAN file and record locking for Novell, 3-COM, Banyan Vines, and IBM LAN products. In this way, callers can access the system via normal dial-up lines by modem, and internal users can sign on from their LAN workstation.

There are essentially two ways to provide multiline capability from the PC platform. Using serial port expanders, products like TBBS, DLX and Galacticomm support multiple callers from a single machine. The second method links multiple machines together via a LAN with each machine serving one a single line with shared message bases, file areas, and user database between the microcomputers. Wildcat and PCBoard are the two primary contenders in this latter category.

Wildcat features bullet-proof access security, B-Tree indexing to speed data access, and support for connections up to 38,400 bps.

Among its strong points, Wildcat is easy to set up and operate. Up to 26 individual topical message areas, termed "folders", may be configured as well as up to 26 file areas. Because it does operate on a LAN, you may add external programs and make them accessible to all callers. These external programs are normally termed "doors" and typically feature games, surveys, or databases containing specific information. Up to 9,999 bulletins may be posted to a special bulletins screen and a special "Newsletter" function is provided.

Wildcat is particularly well suited to color ANSI graphics screens and many of the publicly available Wildcat systems are among the most visually attractive in the industry.

Mustang Software maintains a product support BBS where you can see Wildcat 2.1 in action at (805)395-0650.

The company also plans a 3.0 release to include additional mail handling features, including support for Novell's Mail Handling System (MHS) standard. The price of the 250 user version 2.1 is \$499. Mustang Software, Inc., 3125 19th St., Suite 162, Bakersfield, CA 93301; (805)395-0223.

## RUMORS

IBM insiders admit to shipping several hundred 80486 cards with faulty microprocessors from Intel. Apparently the floating point processor segment of the chip barfs when faced with certain

odd combinations of FTAN and FSIN-COS - trigonometric functions used by CAD programs primarily. Thousands have gone out but Intel claims they will have it fixed by the end of November. IBM has suspended shipments. ....US Robotics may be planning a major price cut in its HST Courier line - some say as much as 50%. This would certainly bring 9600 bps technology into the reach of the user community as well as system operators and could clinch the growing stranglehold US Robotics has on the high-speed modem market. Announcements scheduled for the fall Comdex....Ashton-Tate plans a major upgrade to their Multimate word processing package. They operate a product support BBS at (213)538-6196.

## eSOFT DATABASE SHIPS - GAMES RELEASED

eSoft Inc. of Aurora Colorado began shipments of a new dBASE III PLUS database extension to their TBBS (The Bread Board System) multi-line information system during the final week of October. The new database expansion module is titled The Data Base System (TDBS) and provides undoubtedly the most powerful database engine available for online information services. The module not only allows use of the dBASE III PLUS database .DBF files, but actually compiles dBASE development language code into programs that run under the TBBS multiline system.

This effectively opens the door for TBBS to run external programs. Almost immediately, two beta testers for TDBS announced the release of small online game applications written in dBASE. Gary Funk of fSoft released an implementation of a game titled Card Guppies for TDBS while Ben Cunningham of The Nashville Exchange offered an online black-jack card game. Both are priced at \$49.95 and allow up to 32 players to access the games simultaneously. Neither program is "interactive" in the sense that one caller can play another but several interactive game programs are rumored to be in the works. When available, such programs would allow multiple callers to dial into a TBBS system and play poker, chess, or other games against each other in real-time.

eSoft Inc., 15200 East Girard Ave., Suite 2550, Aurora, CO 80014; (303)699-6565 voice; (303)699-8222 data. Card Guppies and Black-Jack may be seen online at (303)973-4222.

## LOCAL ACCESS

### EARTHQUAKE DATA ONLINE

On October 17, at 5:04:15 PM, an earthquake with a surface wave magnitude of 6.9 on the Richter scale struck central California at Latitude 37.053 North and a Longitude of 121.851 West - the Santa Cruz/Hollister area south of San Francisco. A total of 83 seismological listening posts around the world reported the slip which lasted approximately 10 seconds. A 5.2 magnitude after shock occurred 37 minutes later at 5:41:24 and several smaller ones over the next three days. Officially, 272 people were believed killed, roughly 1400 injured, and over \$4 billion in property damages were incurred in the San Francisco area. The quake was felt as far south as Los Angeles and as far east as Reno Nevada.

How do we know? We got it online just minutes after it happened by calling the US Department of Interior Geological Survey NEIC Quick Epicenter Determinations Online Information Service.

The Denver Colorado-based service is available at (800)358-2663 nationwide or (303)279-6374 within Colorado at a speed of 300 bps. It uses some rather odd communications parameters of 7 data bits, Even parity, and 2 stop bits (7E2). When you first logon, you will be asked for a CLASS. Enter NEIS. The system then presents a USER: prompt. Enter QED for the Quick Epicenter Determination database.

You can search this detailed database for information based on date of occurrence, magnitude, or location. We asked for all occurrences of a magnitude greater than 4.0 during October and were rewarded with a surprisingly lengthy list of earthquakes. It would appear that four or five earthquakes per day occur in various parts of the globe at that magnitude. On October 1 over 300 homes were destroyed in an Iranian

quake and tremblers have been occurring with some regularity in Japan, China, the Philippines, and the Aleutian Islands.

The California earthquake also put a strain on communications technology. Pacific Bell reported a peak of over a million calls per minute on the area's 3.3 million circuits shortly after the quake hit - ten times normal volumes. AT&T reported a record high of 145 million calls between midnight Tuesday and midnight Wednesday. Of 28 million calls directed at San Francisco, only 9.5 million were completed. San Francisco typically receives 3.5 million calls per day. While 20% of the areas 5 million residents went without electrical power, the telephone service operated largely without incident although many incoming long distance calls were never connected.

QED also provides a wealth of geomagnetic measurement data and a historical archive of seismological data dating back to the early 1900s. Bruce Presgrave, U.S. Geological Survey, Stop 967, National Earthquake Information Center, Box 25046, Denver Federal Center, Denver, CO 80225; (303)236-1500.

## LONG DISTANCE USA

### USA TODAY SPORTS CENTER

USA Today has introduced a new commercial online service worthy of some note. The USA Today Sports Center provides a capable online service focusing on a particular area of interest and does it quite passably well. The service provides sports news, statistics, fantasy leagues, and online board games.

The service can be accessed by Telenet, Tymnet, or by direct dial offering a variety of options at varying connect time charges. There is no online signup option. You must set up an account using a credit card or direct checking account deduction by calling voice

## USA TODAY SPORTS CENTER ACCESS CHARGES

Method	6PM / 6 AM	6 AM / 6 PM
Tymnet	\$4.95	\$14.95
Telenet	\$4.95	\$14.95
Telenet 2400	\$5.95	\$15.95
Toll Free 800	\$12.95	\$17.95
Direct Dial	\$3.95	\$3.95

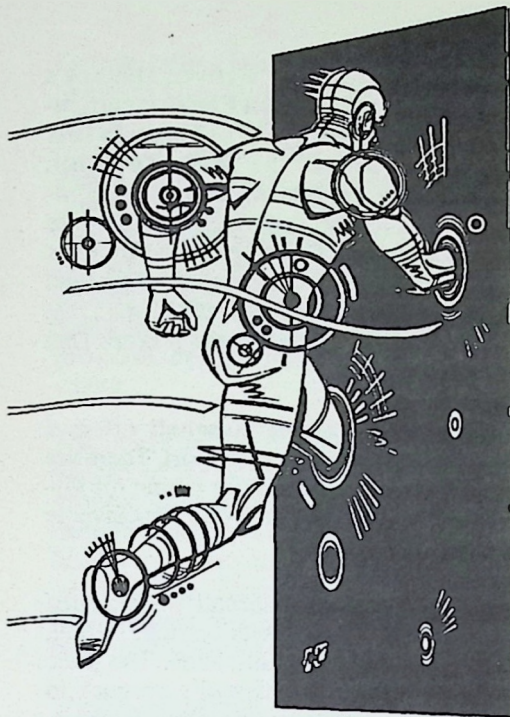
(800)826-9688. A \$14.95 initiation fee is required and you WILL want to order the optional SportsWare graphic communications package at \$24.95.

Once you are on the books, there are several ways to connect to the service. Via Telenet for example, simply dial your local Telenet number, enter a terminal type, and at the @ prompt enter C 919135 for the service. You must then enter your MEMBER NAME and PASSWORD to gain access. Tymnet works similarly but to connect to the Sports Center computer, enter LINC. Again you must follow up with a MEMBER NAME and PASSWORD.

A direct dial access number is available at (919)852-0614 and there is even a toll-free access number at (800)654-2319. Set communication parameters for 7 data bits, Even parity, and 1 stop bit. On connect, there is no screen indication that you have connected to anything. Enter A and the service wakes up and asks you for your MEMBER NAME and PASSWORD. Connect charges are as shown in the accompanying panel.

We played around with the service using a standard communications program, in this case Telix. It was nice. Lots of info. Games. But rather plain and a bit difficult to navigate. The games were of the Xs and Os variety. This is a good method for getting quick sports news and stats using a laptop. Good option, but not the way to use this service on a regular basis.

We installed the SportsWare software we received with our package. Installation was relatively uneventful with the



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- |                      |                     |
|----------------------|---------------------|
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| (3) GalactiWars      | (4) Alchemy II      |
| (5) Quest for Magic  | (6) Galactic Empire |
| (7) Quest for Zen    | (8) Kyrandia        |
| (9) Poker            | (10) Othello        |
| (11) Chess           | (12) Checkers       |
| (13) Sea Battle      | (14) Robowars       |
- plus much more!

### News!

- (1) UPI Newswire
  - (2) USA Today Decisionline
  - (3) BBX News from Byte Magazine
  - (4) NewsBytes
  - (5) InfoMat Magazine
  - (6) BoxOffice MoviTrak & OnVideo
  - (7) ODMR - Online Digital Music Review
  - (8) Business Sense
  - (9) Zip Beep Humor Magazine
  - (10) BBS Telecomputing News
  - (11) Boardwatch Magazine Online
- plus much more!

### Downloadable Files!

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**PC-Pursuit, StarLink, and other local access numbers are listed online.**

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Check one:

\_\_\_\_\_ 3 months for \$20 \_\_\_\_\_ 12 months for \$60

Check one:

\_\_\_\_\_ Check Enclosed

\_\_\_\_\_ VISA \_\_\_\_\_ MasterCard

\_\_\_\_\_ Discover \_\_\_\_\_ American Express

Credit Card Number: \_\_\_\_\_

Exp Date: \_\_\_\_\_ Issuing Bank: \_\_\_\_\_

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone Number: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

After you have completed the above, mail to:

MedCom Information Systems, Inc.  
6312 East Santa Ana Canyon Road #361  
Anaheim Hills, CA 92807

BW

exception that it insists on creating a directory on the C: drive titled C:\USA. No options here. Enter \USA to start the program.

The SportsWare package is actually what makes this service tick. Like the IBM/Sears effort, **PRODIGY**, SportsWare provides an absolutely stunning graphics interface to the service - especially with a color EGA or VGA system. After running it both ways, we would have to note that the software is virtually a requirement to really get the good out of Sports Center. So far NO commercial service has succeeded by requiring subscribers to use proprietary software. Perhaps Prodigy and Sports Center can reverse this trend in the months to come.

You must setup the software by entering the telephone number you wish to call, some information about your modem, your member name, password, and so forth. Nothing terribly tricky. Once that is in, you can call Sports Center at any time by simply entering \USA to call up the program and pressing F10 to logon. The software takes care of the details.

The interface to Sports Center would probably be THE best in the industry but for a few obvious glaring errors. Essentially, you can access different areas of the system using four different techniques - all pretty good actually.

When you first logon to Sports Center, you will be greeted by a red grid of boxes reminiscent of nothing so much as the **Hollywood Squares** television show set. To access an area, simply use the cursor keys to move a yellow box highlight from one square to the next, and press return to select a service. Alternately, each square has a tiny number in it. You may simply enter the number and press return for a bit quicker access.

The software also features what is termed a **quick menu**. Press F1 and a pop up window presents you with a list of main services. A sliding bar can be used to select one and press return to activate. The software then enters the commands for you.

Finally, for expert users, the fastest way around the service is to enter GO commands much like Compuserve. **GO SPORTS** for example takes you to the

main menu. The documentation does NOT list these commands and they are NOT obvious on the system. But you can obtain a listing of commands online by entering **GO INDEX**.

These four interfaces make navigation on this system easier than on ANY online system we've been on and certainly easier than any commercial service. In a word, it is superb. Unfortunately, it doesn't always work. We got into the chess area and simply couldn't get out. There was no menu option in a square to leave the area. No little numbers. Nothing. We finally had to ask someone else on line how to get out of the service. The response: **GO SPORTS**. It worked great. But in all the documentation we received, all the online help files, there was no mention of this anywhere. Likewise, you will be hard pressed to discover how to get off the system to logoff. Simply type **OFF** at any prompt.

We run into this "I can't get out of here" situation on a number of services. We would like to think that it is oversight. Unfortunately, the developers can't resist the temptation to make it easy to stay online and hard to get off by software design. This is so pathetically short-sighted it makes you want toretch. On an otherwise superb service, the subliminal message is that "We don't offer enough value to keep you online - so we'll trick you out of an extra half-buck while you're here". People, online or off, don't like to feel they've been shysted out of anything no matter how small the chump change.

And this service needs no cheap ploys to hold the callers interest. USA Today Sports Center offers the most complete sports news coverage we've seen anywhere with up-to-the-minute sports news, statistics, and commentary. Statistics are available from Elias Sports Bureau, PGA, NHL, Howe Sports Data, and SportsTicker. With Sports Center, you have access to more up-to-the-minute stats than the average television sports caster.

An NFL Fantasy League is thoroughly fascinating. Given a \$30 budget, you "shop" for a team made up of a quarterback, receivers, tight ends, running backs, a kicker, and defense. Prices of players are determined by their actual

performances. The **Denver Donkey's** star quarterback **John Elway** is currently going for \$5. He'll be happy to hear that and so will the Donkey's owner. You enter this fantasy team into a competitive league and weekly results are based on actual stats prepared by Elias Sports Bureau. It winds up being kind of an ongoing tournament based on real sports activity. It's fun and it keeps Dad off the street.

**Rotisserie League Baseball** offers a similar scheme for that sport. There are also complete schedules online for virtually every team in every conceivable sport in the nation.

One interesting baseball related area deals exclusively with buying, selling, and trading **baseball cards**. The price of virtually any baseball card back to 1948 is available in an online database. A 1955 **Ted Williams** card under the TOPPS brand name goes for \$200 these days while a **Sandy Koufax** in his 1955 rookie year sports a \$350 price tag.

Some very interesting history on baseball cards is also available. Apparently, the first baseball card was put out by the **Peck and Snyder Athletic Equipment Company** in 1868. It featured a photo of the **Brooklyn Atlantics** baseball team. Cards were first offered as promotional giveaways with cigarettes, not bubblegum. And there are apparently many active traders today.

Aside from a wealth of sports data, Sports Center offers some very attractive online board games including chess, checkers, reversi, go, poker, blackjack, and backgammon. All feature ongoing tournaments, ladders, and contests. Backgammon, reversi, go, and chess, also feature real-time games.

This works pretty well actually and the graphics presentation of the chess board and the backgammon set are superb color renditions. Essentially, you "mark up" for a game. Then you can go elsewhere in the system. When another caller also marks up for a game the system pages you for your game. Meanwhile, you can go to the spectators gallery and select from a list of current games in progress to watch.

Despite calling in at 1:00 AM Mountain Standard Time (3:00 AM in Greensboro NC where the system is physically located), we found three or four chess games and a couple of backgammon games in progress. We applied for a game of chess with the Match Master and after four or five minutes we had another caller online ready to play a game of chess. We lost. Obviously a program design malfunction somewhere.

The chess area is clearly the most advanced of the board games. The board graphic layout is superb. There are enough instruction files on the rules and history of chess to actually learn the game online. There are also the usual postal games where you make a move each time you logon.

The chess news area was simply fascinating. The surprise winner of a recent qualification match was 15-year old **Gata Kamsky** who defected from the Soviet Union while playing the New York Open earlier this year. Kamsky won the right to face world champion **Gary Kasparov**.

We also learned that Kasparov had recently defeated the highly touted "Deep Thought" computerized chess algorithm, developed by a graduate student team at Carnegie-Mellon University and purported to be the most advanced chess computer in the world. The bout lasted but 90 minutes and ended with **Deep Thought** going into **deep reset** - losing both games embarrassingly. A full play-by-play recap of the match is available online.

The documentation received with the SportsWare software package is largely limp - given mostly to page after page of legal disclaimer, waffling, and back peddling interspersed with catchy and slightly nauseating promotional hype. But this has become pretty normal fair among the online services. The documentation does clearly indicate that you can exit **ANY** function by entering **QUIT**. You can't. We tried in the chess area and it simply takes us to another screen in chess. In fact, we tried to watch a reversi game and for some reason **THAT** took us into chess - an entirely different area. It would appear that they do want you to try the chess area. Do. It is fascinating.

The F10 key on the SportsWare version we had flashed a screen of very interesting function key assignments - for about 1/10 of a second. By pressing the key very fast repeatedly, we did decipher a few function key assignments. You CAN capture a session to disk, a game board layout to disk, and even drop to DOS while online.

Despite a few complaints with the documentation and a few structural errors in the system (exiting chess notably), the command interface has to be the best in the business. Snappy response, easy cursor key movement selections, and the interface is very visual. Probably unique in the online world.

It is a difficult thing for an online service to strike that delicate balance between "something for everyone" and the mess some online services have created with an unnavigable heap of unrelated offerings that make it difficult to find areas of personal interest. USA Today's **Sports Center** has retained the power and scope of a Compuserve while maintaining a superb focus on their stated themes of Sports and Board Games. We find this solid theme enchanting overall and a welcome addition to the online world.

The richness of options both in access and the command structure combined with a superb graphic interface and strong focus on a theme make this service a winner - and for sports and game aficionados, a must. USA Today Sports Center, Building 9, Terrace Way, Four Seasons Executive Center, Greensboro, NC 27403; (800)866-9688 voice.

### TOMBSTONE INFORMATION SERVICE

Jim Faliveno went to work for his uncle in 1970 in what is known as the monument business. Basically, he drew elaborate designs on paper for tombstones, memorials, and grave markers. The process was laborious and subject to many changes at the whim of bereaved customers seeking a suitable rock for their cold, stiff, but dearly departed loved ones.

Frustrated with the process, Jim looked for a way to automate it. The result was **MONU-CAD** and a new company -

**Monumental Computer Applications Inc.** This is a fascinating system consisting of a 10 MHz AT computer with 40 MB hard drive, a pen plotter, CAD software, and a sprocket drive roll stencil cutter made by a company in Belgium called a **Grafitype CSR 700**. Using the system, you can create tombstone designs, plot them out for review/approval and then use the stencil cutter to cut a 30-inch wide rubber mat with the design. Place the mat over a piece of granite and hit it with a sandblaster. The resulting design is etched onto the polished face of the stone.

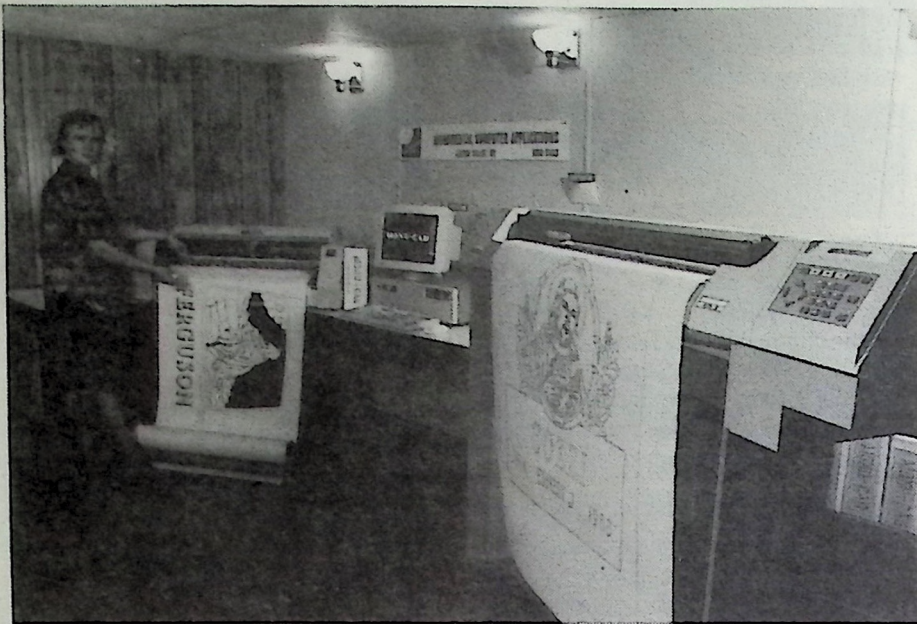
Last February, Faliveno put up a **MONU-CAD BBS** using Wildcat software at (607)264-3307. Though basic in design, this system is an excellent example of a specialized application of BBS technology.

**MONU-CAD** features over 200 CAD files containing design elements **MONU-CAD** users can download and use to create grave rocks. We found drawing files containing such graphic elements as praying hands in stained glass, a west coast American Beauty rose corner carving, a rose entwined around a crucifix with a rosary, a cross and cala lily, birds on a tree branch, a book panel with scroll suitable for memorials, a hunter and beagle under three pine trees, a profile of Jesus praying, the hand of God with sunlight, and a custom drawing of the heart of Texas.

The **VETSET** contains over twenty official U.S. Government symbols, and one drawing that brings to mind a particularly poignant mental image for tombstone use - a giant golf ball on a tee.

One Canadian company uploaded the Canadian Memorialists Hebrew Alphabet. A program called **MONUKERN** allows you to correctly space lettering and over twenty separate alphabets are now available.

The board is becoming an international clearing house for tombstone design elements. The company claims 41 installations across the U.S., Canada, and Europe with inquiries from India, Israel, Iceland, Australia, Germany, Africa,



## MONU-CAD

and Italy. The West Coast American Beauty Rose is on the verge of becoming a standard.

We can picture a number of uses for a CAD system/stencil cutter combination that don't have anything to do with tombstone's per se. The same basic process could be used to make nameplates, T-shirt designs, customized advertising novelties and signs. Monumental Computer Applications Inc., 9 Genesee St., Cherry Valley, NY 13320; (607)264-3611.

### FLY-FISHING INFORMATION ON-LINE

Several times we've mentioned the concept of a Fly-Fishing bulletin board system as an extreme theoretical example of the type of specialized information service we think will become prominent in the future. Theory no longer. We found two actually.

Bryan Moir and the Skyline Hotel in Toronto claim to offer the definitive source of information for the fly-fishing community on **FLY FISHER'S FORUM** at (416)463-9090. The ser-

vice describes places to fish, fly fishing products, and provides professional articles on various technical aspects of baiting the underwater winged-ones using fly lures. Information on fly-tying parties and special Canadian fly-fishing trips is also available.

According to their online promotional file, "the Fly Fisher's Forum was created out of a love of the outdoors, of fly-fishing, and of sharing good times together. We are a club solely devoted to forwarding the great sport of fly-fishing."

There was also information available on the Izaak Walton Fly Fishing Club. The founding meeting of this organization was held in 1971 with 26 interested parties. An active organization of some 325 members now flourishes.

We noted articles on bugs for bass fishing, a report on fishing the Dechute in Oregon, and a description of trout reservoirs in Missouri. The access fee for this system is \$25 annually to Fly Fisher's Forum, 17-333 Denison St., Markham Ontario L3R 2Z4.

Perhaps an even more extensive system, albeit not solely devoted to fly-fishing, Jim Pratt's **FISHING LINK** in LaCrosse Wisconsin operates at (608)526-9292. This system contains a large body of information for fishermen.

The Galaticomm software provides a difficult interface for presenting this type of information. File areas per se are unavailable and files must be attached to messages. But Mr. Pratt has developed a reasonably successful work-around via an extensive set of **SIGS** (Special Interest Groups) working as topical areas for files. A **HOTSPOTS** area contains member field reports on fishing areas. The **REGS** area provides information on licenses, limits, and regulations for various states. The **RECORDS** area provides current hook and line records. The **NUMBERS** area provides an extensive listing of 65 telephone numbers of resorts, state fishing report hotlines, tackle manufacturers, and tour guides. Other areas provide information on tackle, Mississippi River daily statistics, river and lake graphic charts, solunar tables, and available trips and tours.

One area we found to be an inspired touch provided recipes for cooking fish. A dish titled "Walleye in the Fry Daddy" looked interesting. A recipe for making Poor Man's Lobster from Pike and Ed Spika's Pickled Fish seemed enticing. We may actually try the recipe for New England Fish Chowder.

Overall, this system is comprehensive in scope and detailed in presentation covering almost all aspects of fishing from where to go, what to use, how to do it, when to do it, and how to cook it if all the aforementioned happens to work. Despite the awkward interface, this system is a clear water winner. The Fishing Link, PO Box 2586, LaCrosse, WI 54602.

### COCONET - IS THIS THE FUTURE OF BBS?

We found a system in San Diego, or perhaps it found us, that may mark the future of online services. And if it doesn't, we may call back anyway.

The Bells are putting up online gateways that require you to run an especially limp **MINTEL** emulator program on your PC. IBM/Sears has improved on this somewhat with their **PRODIGY** service which provides stunning graphics by having you run **THEIR** proprietary software to access the system. Now **USA Today** has introduced a **Sports Center** that also provides great graphics using **THEIR** terminal program. Our hard drive is literally reeking with little terminal graphics programs to access these services.

We found room for one more. And this may not only be the best of the bunch, it's from a tiny little company in San Diego called **Coconut Computing**. It's run by Brian Dear and his wife Patricia.

The outfit offers an online service for \$5 per month aimed primarily at the San Diego market. To access it, you have to order their special terminal program for \$29.95. The system is titled **COCONET** for **COmmunity COmputer NETwork** and it runs on their own home-grown software at (619)456-1511. You can dial a special order line at (619)456-0815 with an ordinary comm program such as Telix to order the software. Set comm parameters to 7E1. They also have a sort of crippled demo version available as a public domain file titled **COCONET.ZIP**. We'll have it for Boardwatch Subscribers on the online service at (303)973-4222.

We did get their full package. It included a very well done little booklet explaining installation, features, and use. The major networks should take a look at this cheap, plain little book to find out how to do online service documentation. It was clear, to the point, easy to follow, and very usable. It had a lot less glitz and a lot better writing than most of what we waded through. Somehow they even survive on about 3/4 page of legaleze and disclaimer. Installation took 30 seconds.

To configure the program, specify a comm port, modem speed, and access telephone number. Enter your name, address, and user number before dialing and it takes care of the logon for you.

The graphics were **SUPERB**. Easily on par with what Prodigy or USA Today is doing - in some key ways superior. The system works with **EGA/VGA** color or **Hercules** monochrome graphics. A sliding menu bar across the bottom of the screen pops up little menu windows. These lead to lists of items you select using a sliding highlight bar. The interface is completely intuitive - no learning curve at all.

The system displays advertisements in a panel on the right of the screen. Unlike Prodigy, or Minitel, the text appearing on the left is of reduced size allowing what appears to be a full 80 columns in about 3/4 of the screen. Reminiscent of the **EGA/VGA 43-line** mode. But it was quite readable and it avoids the problem Prodigy and Minitel has of presenting a tiny bit of information on each of about a zillion screens. The "information band width" is good here. You get plenty to read before cycling to the next screen.

The service has several features and they all use a kind of branching database tree presentation for files, discussion areas, and movie/theatre listings that works quite similarly among what are usually completely different types of functions. The file area, for example, takes you to a list of maybe 40 topical areas. Slide the bar down to one that looks interesting and press the **ENTER** key. A new list appears on screen of all the files in that area. To download, press the **ENTER** key and enter the file name/path where you want it to appear on your system. A little progress box bar graph appears on screen and that's all there is to it.

Likewise, some 39 different discussion areas are available. Pick one with the sliding bar, press **ENTER**, and a list of messages appears. This presentation paradigm is used to do almost anything on the system. It's quick, intuitive, and we think it is probably the best interface we've seen online anywhere.

The service exists primarily to serve the San Diego Community. It provides the best database of local entertainment services available anywhere bar none. A list of cinemas, for example, lists 48 movie theater's in the San Diego area. Slide the little bar down and select a cinema. The program displays in a large

font the theater name, address, telephone number, and what movies are playing on what screens at what time. A little asterisk even notes if stereo sound is available. Capture the screen to disk if you dare.

Another selection lists movies. They currently had 48 movies listed. Slide the bar down on **BATMAN** and the service lists all theaters playing Batman, times, dates, locations, telephone numbers - the works. Incredibly usable and virtually up-to-the-minute.

They use the same paradigm to present every playhouse and dinner theater in the San Diego area and again, they allow you to access it by play title if you prefer or by theater. *Fiddler on the Roof* is playing at the Mid City Theater - address and phone provided along with times and dates. South Pacific is on at the Lawrence Welk Resort Theater.

The system also provides some other services such as multiline chat, games, a service where you can compose and send a fax for \$1.25 locally or \$2.50 outside of San Diego. Byte Magazine's Microbytes is in the discussion area on Microcomputers.

Unlike most of the proprietary terminal programs, this one manages to contain a pretty full gamut of features while greatly simplifying operation. File downloads are supported, and according to Brian Dear, VP of Coconet, file uploads will be allowed in the next release along with a facility for attaching files to messages.

We were shocked to learn that the system runs on an **AST Premium 20 MHz 80386** machine under **SCO Xenix**. Currently seven lines are in operation. Up to 48 lines can be accommodated on a single machine. According to Dear, they are trying to setup Coconet so that all maintenance tasks done from their end use the same easy interface as appears up at the front counter for callers. This is intended to reduce training time for future maintenance employees.

Coconut computing is considering a release of the software for other information providers although it may be a bit down the road before they can assemble the documentation and utilities necessary to make it an off-the-shelf

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**(312)622-4442**

product. When they do have it ready, we'll be among the first to request a copy.

In conversation with Dear, we several times made comments of the "too bad you can't" type. To each, he responded that actually you could - just do X and that's all there is to it. For example, "it's too bad you can't dial Coconet via packet-data services such as PC Pursuit. "Oh you can," was the response. "Just start the program with COCONET 2400 DIRECT instead of COCONET and you can use AT commands to dial PC Pursuit, access a modem, and dial into the system. When you get the ORDER prompt, just enter COCONET and the software takes over. It's not really documented, but we do have several people doing it."

The software behind Coconet took over two years of seven-day weeks to develop and it shows it. Coconet has so severely limited its audience, we don't see how it can survive. It is really directed at the San Diego community. Aside from the movies and play information, there really isn't too much of

national interest. And you have to have their terminal software to run it. There must be about 100 people in the world at this point who qualify on both counts.

But on the other hand it is so technically superb, all the marketing and documentation is so low-key, appropriate, and tastefully done, that in our own perfect little fantasy world of what ought to be, this system is a winner and it **SHOULD**, by all that is right, do well. The service is **NOT** just brimming with all the info in the world, but what is there has clearly been done by someone who keeps his socks in neat little rows in a drawer somewhere - a classically obsessive perfectionist. Those guys make lousy husbands and excellent programmers.

This is essentially a BBS running on a PC remember - not Prodigy. Our question to Brian Dear - when can we have a copy of the software this runs on to put up a similar system in Denver? We'd love to have it whether anyone ever called it or not. Maybe two or three of his universe of 100 in San Diego would call us - meanwhile, we could play with

the pretty screens. Despite the complexity of supporting your own terminal program, we think this could very well be the BBS software system of the future. Remember where you read about it first. Coconut Computing, Inc., 7946 Ivanhoe Ave. Suite 303, La Jolla, CA 92037; (619)456-2002.

### SUMMIT OFFERS ONLINE MULTI-TASKING

by David Hakala

The SUMMIT Network is yet another challenger to Compuserve, but with a remarkable difference. Instead of running up clock charges while reading mail or idly sitting through a file transfer, SUMMIT (they like it capitalized) allows users to make the most of their connect time by performing up to six simultaneous tasks through a single modem.

A lot of connect time is wasted. While you're busy reading or typing, nothing useful is going through the phone line. SUMMIT takes advantage of this "dead space" to get more done in each clock tick. Several files can be queued up for uploading and/or downloading while the user goes on to something else. While file transfers go on in background, up to four windows may be open on the screen at once for messaging, database inquiries and other text-oriented functions. Essentially, a multi-tasking online service.

The user manual says you could download and upload, chat in two conferences while reading your mail in a third window and composing a reply to another letter in a fourth. Perhaps a spider with its eight arms and myriad eyes could; we found more realistic applications for online multi-tasking:

A geographically-scattered group of sales reps, teachers and students, etc., could form a private conference on SUMMIT. The moderator could present a graphic or text file to all participants at once, while another window could be open for group commentary.

Private side conversations would also be possible in one or both of the remaining windows ("Psst... George! Is this boring or what?"). Everyone in the group could be uploading sales reports

# MICROLINK B

Multiline BBS (303)-972-9600

DESIGNED AND OPERATED FOR THE SERIOUS BBS USER

## WHAT IS MICROLINK B?

Microlink B is the largest electronic Bulletin Board System (BBS) in the area, specializing in files and message services for the IBM-PC, XT, AT and compatible systems.

Microlink B has been serving the BBSing community since 1985 with quality public domain and shareware software, as well as interesting and informative message areas covering a variety of topics.

## FILES, FILES AND MORE FILES

Your membership to Microlink B gives you immediate access to thousands and thousands of files that you can download directly to your computer. There are presently over 31,000 individual files available, and we are continuously expanding our collection. You can have everything from games to statistical calculation packages, database programs to personal finance managers, programmer's aids to computer communications utilities. Put simply, we have one of the most extensive software collections for the IBM-PC and compatibles in the country.

There's more... Microlink B maintains the complete 1,000 disk PC-SIG software library available on-line for our members. We think you'll agree that the PC-SIG library is one of the most comprehensive software collections available for the PC.

We do not provide software for the Mac, Amiga, or other non-IBM compatible machines. Why? Because we think it's better to put all our effort into providing you with the best possible software collection for your IBM-PC or compatible system.

## TALK, TALK, TALK

We do messages too. The Microlink B message base is connected to the world via the FidoNet public amateur network. We 'echo' many of our message areas to other FidoNet systems in the area, across the country, and around the world. This means you can ask a question on Microlink B, and

receive answers from experts all over the world.

We have message bases covering a variety of interesting topics from programming and technical issues to law, from aviation to using Lotus-123. And, yes, we do offer private E-MAIL message areas where you can leave confidential messages and files for other Microlink B members.

Microlink B also offers USA Today's Decisionline, a computerized version of the popular USA Today newspaper. Decisionline is updated early every weekday morning.

## WHAT YOU NEED

To access Microlink B, you'll need an IBM-PC or compatible computer and a modem capable of operating at 1200, 2400 or 9600(HST) baud, as well as one of the many communications software packages that are freely available.

## TAKE A TEST DRIVE TODAY

You can call Microlink B anytime to take a test drive. Set your communications program for 8 data bits, no parity and one stop bit (refer to instructions for your modem or communications software). Dial Microlink B at (303)-972-9600. Microlink B will ask for your full name, and then guide you along the way with easy to follow menus. You'll be able to tour the system, read messages, and look over our software collection.

## BECOME A MICROLINK B MEMBER

For just \$35.00 you can have full access to Microlink B for one full year, or pay just \$25.00 for six months access. Use the handy order form below to become a Microlink B member. For your convenience, we now accept Visa and MasterCard.

Prices and specifications are subject to change without notice.

Registration Form **Microlink B** (303) 972-9600

P.O. Box 620247 Littleton, Colorado 80162

**YES I want FULL access to Microlink B!**

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Signature \_\_\_\_\_

Name \_\_\_\_\_ Date \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Telephone(\_\_\_\_) \_\_\_\_\_

Name you will use for BBS Logon

First \_\_\_\_\_ Last \_\_\_\_\_

Password \_\_\_\_\_

or homework to the moderator, or exchanging classroom love notes and unrelated files among themselves.

You could send up to six different mass mailings to different customized user lists at the same time: two file transfers and four message-uploads. The potential for junk E-mail makes us a trifle nervous, but custom newsletters and political-action bulletins are potentially interesting applications.

Telecommuting writers and editors could dissect and rewrite an article in one window while arguing over style and content in another. If you're having a program-logic problem, you and your consultant could review and revise the source code as if you were in the same room.

SUMMIT also provides such familiar items as games, news wire services, on-line shopping, Grolier's Encyclopedia, shareware, special-interest forums and databases.

**City Profiles** is an interesting database example, presenting detailed descriptions of local attractions, laws and economies in various cities around the country. We learned, for instance, who to call for a Reno divorce and how much money to bring. It might also be useful for exploring relocation and new job markets.

Introduced at \$6 hourly off-peak and \$18 peak in February, the service is going to a prime-time rate of \$15.60 (weekdays, 8am-4pm PST) and \$10.20 off-peak effective **December 1**. *Existing customers and those who sign up before December 1 will lock in the old lower rate.* A "toll-free" connection number at (800)525-9608 means there are no additional calling charges.

SUMMIT is a UNIX-based system; that's all we could get out of them. Users need a proprietary communications package, **The Communicator**, which the company mails at no cost and freely distributes via user groups and bulletin boards. (Boardwatch Online Subscribers can download the program at (303)973-4222. The file is titled SUM111.LZH and is stored in the LHARC file compression utility format).

We've been monitoring SUMMIT's birth since first learning of it in January. Like any leading-edge technology, this one had a couple of false starts, finally getting online in June. We signed up then, and just received our user manual in October. But it was worth the wait for us Type-A power-modemers. If you wish you could get more done online in less time, SUMMIT is for you too. SUMMIT Telecommunications: 5707 Corsa Avenue, Westlake Village CA 91362. Voice:(800)322-3299 or (818)707-9991.

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## SOFTWARE

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### QMODEM SST 4.1 COMMUNICATIONS PROGRAM

The Forbin Project has released an upgrade to their popular QModem shareware communications software for the IBM PC. The new version comes in a whopping five files titled QM41DSK1.ZIP through QM41DSK5.ZIP.

The new version incorporates several bug fixes and a couple of enhancements. The dialing directory has been enhanced with several features to make finding a particular BBS in your directory easier. And a problem with the Auto ZModem has been taken care of. They claim their scripts run up to 300% faster now as well.

QModem offers an excellent host mode via an external program titled DOORWAY. This allows you to throw up a personal BBS on your system quickly that you can dial in remotely, drop to DOS, and do most anything you would normally do after the fashion of Carbon Copy and PC Anywhere.

On the good end, QModem is one of the prettiest communications interfaces on either the commercial or shareware markets. Stunning color combinations are available in concert with drop-down windows making use a pleasure. In this release, they've incorporated a fairly extensive list of modems you can select from in the setup and so avoid the usual initialization string nightmare. Simply select your modem, or the closest thing to it, from the list and

QModem performs the setup for you. US Robotics HST and Dual Standard modems are included and QModem supports the 16550 UART serial port chip needed to fully take advantage of the speed offered by those modems. A variety of other models is also included.

Among the various emulations offered by QModem is a bizarre interface titled JIVE. Jive converts everything coming in to a vernacular common among southern blacks of the. They will likely find it offensive but it is moderately amusing initially. Not likely to become your favorite interface. Dialing a local TBBS system we found ENTER YOUR FULL NAME converted to ENTA' YO' FULL NAME. The USA TODAY NATIONAL NEWSPAPER was changed to USA TODAY NASHUNAL NEWSPAPUH. All messages were likewise converted to this Mark Twain dialect. After a number of complaints from offended gentlemen of a darker persuasion, we understand John Friel released a version 4.51B removing the offending emulation. It is still available separately from his BBS.

QModem probably offers the best context sensitive help facility of any communications program. Press F1 from almost any operation and you will be treated to several screens of information written quite clearly on what you are doing and why you want to do it. We did note some inaccuracies.

On the downside, a fully installed QModem sprawls over a ridiculous 2 MB of hard disk real estate. But much worse is the matter of file transfer protocols. John Friel has apparently decided that protocols fall under the category of someone else's business. QModem comes equipped with XMODEM, YMODEM, and ASCII protocols and if you want more, there are facilities for adding external protocols such as YMODEM-G, SEALINK, and ZMODEM - standard protocols included in most communications programs. The thinking behind this bizarre programming decision simply escapes us but it is an almost fatal flaw in an otherwise superb program.

The Forbin Project maintains a multi-line support BBS with US Robotics HST modems at (319)233-6157. The Forbin Project, PO Box 702, Cedar Falls, IA 50613.

## CROSSTALK FOR WINDOWS

Bill Gates of Microsoft has been selling the concept of Windows almost as long as he's sold BASIC. The graphic interface and multitasking of Windows clearly has a market as illustrated by the success of Apple's Macintosh computer. But Microsoft Windows has been hampered by two main problems: it's slow and third party programs must be specially written to run under it. With the growing popularity and shrinking prices of 80386 iron perking along at 20MHz or better, speed should become less of a factor. But there is still a famine in the area of application programs. It is getting better.

Digital Communications Associates Inc. of Roswell Georgia introduced their popular communications program Crosstalk for the Windows platform last July. The program was a major development effort in that it not only runs under Windows, but it provides full support for Microsoft's Dynamic Data Exchange (DDE) protocol. DDE is the standardized method for passing data between concurrently executing programs under the Windows interface. An Excel spreadsheet for example, can use Crosstalk to dial up an online database and retrieve stock quotes for use in the spreadsheet. The Windows implementation also provides the more usual amenities such as pull-down windows, mouse support, and dialog boxes.

Crosstalk for Windows features a number of much needed upgrades to the basic program including addition of the ZModem file transfer protocol. Long the darling of the BBS community, ZModem greatly increases the speed of file transfers and profoundly so across packet-data networks such as Telenet and Tymnet - host to hundreds of information services.

Crosstalk for Windows includes the Crosstalk Application Script Language (CASL) used to automate routine communications tasks. The new version features a learn mode that can make script development easier.

During a communications session under Windows, you may start a file download from your favorite local system, hit ALT-ESC to shrink the Crosstalk window down to icon size, and go about your business of watching tropical fish swim back and forth in the other available Windows application. The download will proceed quite normally, and you can zoom back in on Crosstalk when the download is finished or the fish die, whichever occurs first.

Crosstalk operates a product support BBS titled **Crosstalk Communications BBS** in Roswell Georgia at (404)641-1803 and (404)998-8048. Mark Miller, Mitra Kanhal, and Maria Forest serve as a triumvirate of sysops for the service. A kind of half-six-pack of corporate communicators if you will. The system uses PCBoard BBS software to present information on Crosstalk products including Crosstalk for Windows, Crosstalk Mark 4, and Crosstalk XVI. We found some very active message traffic from avid Crosstalk fans on the system along with a few complaints concerning ZModem protocol problems. Apparently, the protocol was thrown in at the last minute and didn't actually make it into the documentation.

The service also provides a wealth of pre-written scripts for Crosstalk including logon procedures for Tymnet, Telenet, CompuServe, Dow Jones, Delphi, Vutext, and others.

As virtually the only popular communications program capable of seamless operation under Microsoft Windows, Crosstalk should be pretty well received among the Windows enthusiasts. It's priced at \$195 and owners of the Mark 4 and XVI models can upgrade for \$95. DCA/Crosstalk Communications, 1000 Holcomb Woods Parkway, Suite 440, Roswell, GA 30076; (404)998-3998 voice.

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## Electronic Information Services - Survival of the Specialized

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by Jack Rickard

The current world of online information services is in chaos. Even appropriate terms for software products and online services are in confusion. The term "Electronic Bulletin Board System" or "BBS", though uniquely descriptive on their nature and purpose, has fallen under a cloud. Most online service "infopreneurs" hasten to note that their service is "nothing like a BBS". In reality, that usually remains the best description. But they are understandably loathe to be identified with the 15,000 free hobby systems operating in the U.S. today. Somehow, BBS has become a dirty word.

Many of these systems are admittedly amateurish in nature and often run by technoids devoid of basic spelling skills. Hemingways are notoriously rare in a world more introspectively devoted to hard disk drive arms races and a competition to see who can have the greatest number of shareware titles available for download.

But creative innovation in online services still seems to come from the small operator. The Regional Bell Operating Companies (RBOC) are seeking to dominate the scene with a pathetic lift of the decade-old technology used by the Minitel service in France. Often held aloft as the one success in commercial videotext, the truth is that Minitel has lost money every year it's been in operation - \$742 million this year. It has been government supported from the beginning and a growing movement in France seeks to remove this taxpayer subsidy.

We suspect Compuserve has in reality done about half as well as their published subscription figures. With virtually every modem sold you can get a "free hour" and with it yet another account on Compuserve. I've probably got nine of them myself and in truth, I've rarely used up the full hour. Those that do become enamored of the service

# EXEC-PC

## 90,000 FILES

For Your IBM PC, Mac or Amiga

As Close As Your Modem  
**BBS 414-789-4210**

**EXEC-PC, the country's largest electronic Bulletin Board Service (BBS), has the most extensive online collection of software available anywhere. Yours for the asking!**

*"Exec-PC, the biggest, meanest, most off-dialed and audacious BBS this side of Silicon Gulch." Milwaukee Magazine*

*"How important is the Exec-PC BBS? To borrow a line from a famous hamburger chain, I was the 1,282,770th caller served. And I do mean 'served'. Exec-PC is perhaps the premier BBS in the nation for exchanging software." BYTE IBM Special Edition*

*"Exec-PC, the bulletin board answer to SuperStation WTBS, connects PC users continents apart." PC World*

*"One of the best is Bob Mahoney's Exec-PC out of Shorewood, Wisconsin..." PC Magazine*

*"They provide one of the largest, most extensive libraries of public domain software in the world." Denver PC Boardwatch*

*"Exec-PC Network is by far the largest BBS we've ever seen. You say you want files? This board has them - whatever kind you want... In addition to having one of the largest selections of public domain software, this BBS is a good source for technical information and help." PC Resource Magazine*

### WHAT YOU COULD HAVE

Would you like public domain and shareware word processor programs, communications programs, or excellent database management systems? How about personal money managers, or General Ledger programs? If that is not enough, look at the 3000 games and 15,000 free business oriented programs, utilities, tutorials, and reviews. This gives you everything from hard disk reorganization and backup to stock market management systems. We also maintain the *entire PC-SIG collection* online, the 1400+ diskette collection of public domain software from California.

### WHO HAS IT?

Exec-PC owns and operates the nation's largest electronic Bulletin Board System. Through our BBS, our huge software collection is available to anyone who has access to a modem and a telephone line. We have more than 90,000 individual files available for immediate download to your computer, 24 hours a day, every day.

### WHAT IT IS

The BBS consists of a large computer with BIG disk drives (more than 6 gigabytes!) and many phone lines connected to it. The computer currently has 100+ phone lines, allowing it to talk to 100+ callers at once; it receives about 3000 calls per day. Using the BBS is easy, since it is menu driven and you simply choose what you want to do.

### WE SURE HAVE FILES

A typical user will call the BBS, ask the BBS to show what files are new since his or her last call, find files of interest, then transmit those files across the phone line. After hanging up, the caller can examine and use the new software.

### WE SURE DO TALK

Our BBS also has an active conference system where thousands of people share ideas and solutions. Some conferences include: PC General Topics, Communications, For Sale, Programming, Desktop Publishing, LAN, Graphics, Hardware Speedup, CAD/CAM, Private e-mail, etc. Why pay expensive consultants when there are hundreds of experts available in our forums and conferences?

### HOW TO CALL THE EXEC-PC BBS

1. Set your modem for 8 data bits, No Parity, 1 stop bit.
2. Dial 414-789-4210.
3. The BBS will ask for your name, then you will be guided into the menus.

### IT IS FREE, BUT

You can call the BBS at any time without registering. You can tour the system, read messages, and download some of our files. For greater access privileges you may register at the following rates: \$20 for 3 months or \$60 for one year. There are no hourly or hidden fees! You may subscribe online with VISA or MC, or by credit card, check or money order with the form below.

### Exec-PC

P.O. Box 57 Elm Grove, WI 53122

Voice Orders 414-789-4200 **BBS 414-789-4210**



Prices & Specifications subject to change without notice.

### Registration Form

## EXEC-PC

P.O. Box 57 Elm Grove, WI 53122

**YES!** Register me on the Exec-PC BBS for full access to the country's largest collection of software plus thousands of informative messages and conferences.

☐ 1 Year \$60

☐ 3 Months \$20

☐ Check Enclosed

☐ Visa



☐ MasterCard



Credit Card Account # \_\_\_\_\_

Signature \_\_\_\_\_ Expires \_\_\_\_/\_\_\_\_/\_\_\_\_

## BBS 414-789-4210

Name \_\_\_\_\_ Date \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Telephone (\_\_\_\_) \_\_\_\_\_

Company (optional) \_\_\_\_\_

Name you will use for Logon to BBS (required)

First \_\_\_\_\_ Last \_\_\_\_\_

Password \_\_\_\_\_

usually have their ardor cooled a bit by the first bill that arrives in the \$300 range and they quickly learn to "move on" to a smaller local service with a fixed annual subscription rate.

The CB service on Compuserve is probably their largest revenue producer. Growing numbers of small local services offer the same function with twenty or thirty lines for \$10-\$20 monthly flat rate. Often they are of the adult "sexual titillation by keyboard driven activated-phosphor photon-emission" genre. You can chat yourself into a coma for mere pennies per spasm at that price.

Compuserve's main thrust now seems to be luring companies into paying them \$1000-\$2000 a month for the privilege of being on the service - with access to their dubious list of 500,000 subscribers.

GENie has done somewhat better by simply cutting the online clock billing rate in half. While many of their 115,000 callers are most probably inactive as well, they are in all reality as active a service as Compuserve at that level.

The costs of entry into information services continue to drop. A modest multiline system can now be put online for less than \$10,000. Direct dial long distance rates also continue to drop making the "networks" progressively less important to most online aficionados.

Many operators of these small services try to compete with Compuserve and GENie by offering vast libraries of shareware software for download, multiline chat functions, and games. They typically provide this service at a fraction of the cost - perhaps \$50 per year - with no clock charges. And for local callers, that is the only expense. Long distance dialers are still on the clock via their long distance carrier - typically \$7 per hour direct and as little as \$1 per hour using a packet switch network service such as Telenet's PC Pursuit.

These systems are currently enjoying a healthy growth in callers disenchanted with the \$10-\$12 per hour commercial services. A single monthly bill from

Compuserve in the \$200 range usually results in remorse, marital spats, and a search for something cheaper.

The commercial services and the RBOC are raising the public consciousness of PC Telecommunications. They can afford the immense promotional budgets necessary to not only sell, but in this case to educate the public as to what a modem is and why they are needed. The natural progression of callers will be first to the RBOC gateway services and commercial operations, and from there to the less expensive BBS services as the callers grow more sophisticated and cost conscious in their modem use. As a result, operators of these small clones of the larger systems should enjoy some particularly gratifying success over the next year or two. The boards just covering equipment costs and telephone line charges now should be pleasingly profitable within the year.

And that's a shame. A tragedy in many ways. Why? Because it will encourage the existing general megaBBS operators and cause others to aspire to the same - luring many down the road to eventual failure. And because the small time operator is a guppy in a bowl full of sharks. Already there is an arms race among these small operators to see who can buy the largest hard disk drive unit, add the most telephone lines, sport the fastest modems, field the largest number of shareware files for download, or feature the most lurid sex chat group. In some markets, competition is already looking something like a race riot under the influence of bathtub gin.

And while little two and three man shops will always be more efficient than the corporations, they are moving in a direction where deep pockets count persuasively. As the percentage of the general population with modems climbs toward the 20% mark, and the small operators start to make money, corporate America will stand ready to step in with the inescapable logic that "anything you can do, I can do about half as well but just as profitably by spending money like a drunken ape in a fruit market."

You can't buy a bigger drive than IBM can. AT&T can send all the modem manufacturers in North America into

shift work. And Nintendo can put the Mario Brothers on every screen in the country. At that point, there will be a bloodbath awaiting the small operator.

The real road to profitability for the small infopreneur is in information and most pointedly, specialized information - at this point the economic bottom of the evolutionary food chain. But this is what cottage industry entrepreneurs do best and will always do best.

IBM doesn't create, organize, extrapolate, and cogently present information on specific subjects. They buy it if they need it. Right now they're buying software companies at rates beyond any rational valuation. It's all AT&T can do to give you a telephone number and an address over the phone.

Already Compuserve, GENie, Minitel Services Company, and all the RBOC's are out there scouring the country trying to locate interesting and useful INFORMATION PROVIDERS to put on their systems to make their NETWORKS more attractive to callers. Right now, they are actually charging information providers for the privilege of being on the service. Two years from now, as the competition between these networks heats up, this concept will reverse dramatically and they will offer big sign-on bonuses to attractive, specialized information providers. It may be quietly starting already.

Suddenly, the tiny little single-line system catering to Morrel and other edible fungus/mushroom hunters will become a hot item. The BBS that has struggled for years to accumulate bird watching data as a free system will become a commercial success. The system carrying TV satellite information for years to a limited group of people will become accessible to a national audience.

Why will these systems become financial success stories while the general download systems fade to obscurity? Because they build equity in both their name and their database - not in their rapidly depreciating hardware.

Rather than simply duplicating the next BBS down the road, they develop, nurture, and eventually create a unique body of information. The lonely sysop that sits up nights assembling informa-

tion on hot air ballooning events around the country receives little in the way of reward or encouragement - initially. But gradually, word seeps out among the community that this system is **THE** place to go for hot air ballooning information. By word of mouth, BBS lists, and eventually small, strategically placed advertisements, the reputation of XYZ board as **THE** place for hot air balloon information spreads slowly but inexorably through the online community like ripples on a still pond.

While the initial flow of information is **OUT** from the BBS to these callers, as the reputation of the system becomes more widely known, callers begin to call **IN** to bring information on hot air balloons to the system. Balloon manufacturers begin to take an interest since callers represent a ridiculously well targeted market. Event organizers learn they can promote their balloon gatherings by simply alerting the sysop that they exist and providing schedule information. This reverse flow of information turns the system into a funnel for info on the world of hot air ballooning. A focusing lens on the ballooning hobby scene if you will.

The sysop receives, collates, organizes, and presents incoming information into a rational, usable, accessible resource. Gradually his system becomes an invaluable organizational center for the hot air ballooning community. A resource that true ballooning enthusiasts will pay any reasonable charge to access and of such narrow scope that a scant handful of individuals can organize it much more efficiently than any corporation ever can.

At this point the barrier to entry in the hot air ballooning online service field, as narrow as it may be, skyrockets. It is now not a simple matter of buying a larger hard disk unit. More modems won't do it. More advertising won't do it. Even if you could somehow by magic precisely duplicate every byte of data on that system today, in a week he's left you behind again, because the flow of information is **into** his well known system and notably **not** into your comparatively unknown one. Sure you can compete with him by spending years of grueling effort to assemble a similar system, promote it, and hope that some disgruntled customers of his come to

your system. But you're fighting an uphill battle all the way similar to trying to start your own baseball hall of fame. Much easier to simply find another niche.

Prodigy, AT&T, the RBOC Gateways, Compuserve, GENie, and Nintendo wouldn't dream of competing with the guy. It would cost them hundreds of thousands, perhaps millions of dollars to assemble a knowledgeable team to compile such information and woo the participants to a new system no matter how grandios - and with no guarantee of success. Why should they do that? They're hampered by a stultifying corporate bureaucracy - not stupidity. They can simply buy out the hot air balloonist, or put him on the payroll, or sign him up to a lucrative deal to be on their network rather than someone else's. He has built **INFORMATION EQUITY** into his system. You can't really beat him. You have to buy him. And if there is a market for his information, buy him they will.

And so the large commercial systems become organizers and presenters of small infopreneurs. And the small infopreneur organizes and presents information on his specialty. A kind of natural order comes to this grand school of info-fish, much as it does in everything else in the world. The cottage industry uses the larger networks to gain access to **250 million** Americans and eventually the world. The networks sell access, fight with each other, and try to come up with the magic combination of small cottage industry information providers that will make them the most attractive online network.

There is another advantage to specialization. It is marketable. Ask any general BBS operator why you should pay him \$50 per year to access his service and you've launched him into a thirty minute dissertation on the advantages, and often there are many, to joining up. But most people don't have thirty minutes. And most of the population won't know what he's talking about. Or care. Note that a good percentage of the population doesn't know a baud rate from a Byzantine basketball and as a rule they are not consumed by the desire for an education on either subject.

But a specialized service can usually describe what's available on their service in twenty-five words or less. "It has detailed information on the best mutual fund investments." "A database of 60,000 varieties of garden flowers." "Every pizza recipe ever invented including a strawberry peanut butter variety that's killing em in Hoboken." "Complete schedules for nine TV satellites - updates every 13 seconds." "Every newsletter on precious metals investing ever printed." "A complete catalog of toy soldiers - 1913 to 1975." "Baseball card prices from 1910 to present." "A full directory of every corporation listed on the NYSE." "Help-wanted Ads from 13 major newspapers around the country."

Put yourself in a magazine or newspaper editor's place - good press works wonders for a young BBS. Do they have a story about a system that offers general messages and software downloads? Let's guess not. But if Panama changes leaders on the national news that evening and they can do a story on a local system devoted specifically to Central American Politics - with regular callers from Panama - they'll eat it up. Will the high-speed modem echomail conference make headlines? I'm going to guess no. But a service that matches lost pets and even more lost owners might. A board devoted to programming? Not. Devoted to children's educational software? Possibly. To information on the lost continent of Atlantis? Probably. We actually found a system at one point devoted to "locating the Titanic". The problem was, somebody found the damn ship and put them out of business.

Over the next few years, we will see a formative stage where infopreneurs essentially mark off territories of information on a thousand different subjects. It's currently a free-for-all where almost all subjects are wide open - akin to the land rush caused by the Homestead Act of the last century. Once all the juicy topics are "roped off" by the early pioneers, the come lately's will face the demeaning task of trying to build something from the crumbs.

So while the general download service and chat line group will prosper during the coming year, and the specialist will continue to suffer with a relative hand-

ful of callers, in the long run **ONLY** the specialist will survive. And for many of them, they and a couple of helpful friends face a future of operating an information service out of a residential basement office that provides them a very handsome living dealing with the in's and out's of their favorite subject. No corporate personnel office and no screwy corporate hierarchy trying to get them to pee into a plastic cup. Take the kids to the park for lunch and make up the time later in the evening when long distance rates are low.

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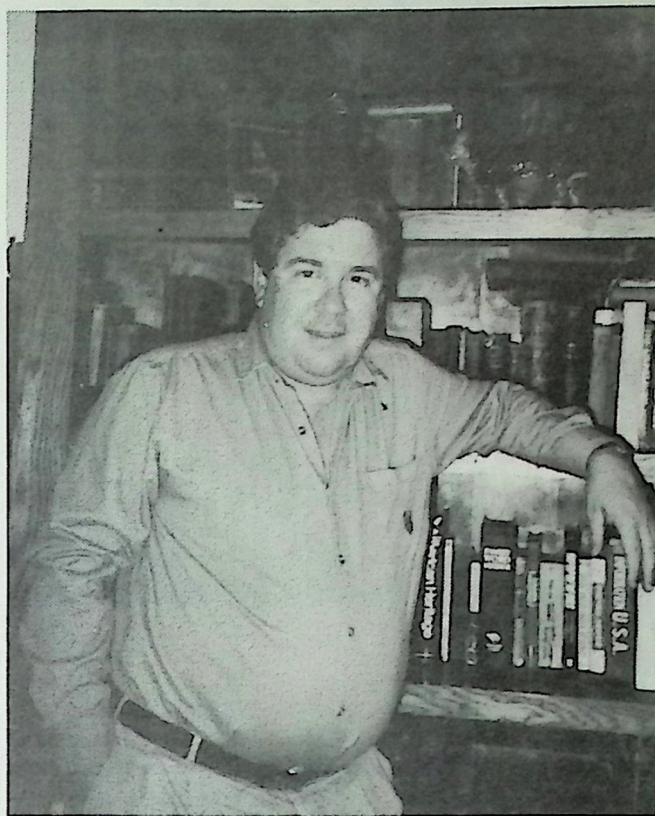
## EDITOR'S NOTES

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I envy the big slick computer magazines their format, their size, their circulation, and their advertising base. Most of all, I envy their ability to plan a special printer issue two years in advance, special issues on personal information managers, and an issue on whether or not LANs exist, ahead of time. I can imagine, barely, carefully selecting from dozens of excellent stories prepared months ahead and bringing it all together into one single brilliant "theme" issue. I can picture that.

By contrast, the rapidly evolving world of PC telecommunications and our own carefully nurtured ineptitude make the final hours of a Boardwatch issue resemble nothing so much as an Apache New Year celebration organized by Jack Daniels and Joseph Seagram. It is always a great relief to learn that the final number of pages is evenly divisible by four, that the cover is in fact on the front, and that we have the right month on the masthead. If a few photos wind up on the right page AND right-side up - we've got a "great" issue going.

What is remarkable about this process is that themes do emerge. We just don't know what they are going to be until we read the issue. This month three of our showcase information services require you to use proprietary terminal emulation software to access their service. Now isn't that odd. The online world is narrow enough with certainly less than 8% of the entire population having access to modems at all. To further narrow that universe by requiring that they have



a software program you wrote to access your service appears on the surface to be suicidal. Yet several of the RBOC, Minitel Services Co., the IBM/Sears Prodigy effort, and our featured services this month are all doing it. Are we missing a trend? What do these guys know that we don't?

**The Summit** offering allows you to perform multiple online operations simultaneously. Both **USA Today Sports Center** and **Coconet** offer an absolutely stunning graphic interface and notable performance improvements. All gain by offloading some of the work from their overworked processor, and your overworked modem and onto your largely idle microprocessor.

When you think about this, it makes sense. Why transmit the same full screen of menu data from their computer, through their modem, through the telephone system, through your modem, into your computer over and over again each time you go back to the main menu. This becomes not only onerous but nearly impossible when dealing with highly detailed graphic images and low modem speeds.

On the other hand, if the images are stored on your computer, the transmitting system need only transmit a three or four byte magic code to call up the image already located there. It follows up with some changeable menu text data to fill in the blanks. In the case of game boards, it need only describe the moves. The volume of transmitted characters goes from the thousands down to the dozens. And the essential information is still conveyed but more quickly and more attractively. Perhaps this IS the way online services will go in the future.

We understand that in a recent videotext panel held in California, even the Prodigy representative was bowled over by Coconet interface. We have it directly from David West of Prodigy that they have invested over a **thousand man-years** in their interface. I'm sure Brian and Patricia Dear of Coconet can sympathize with them. The Dear's between them have nearly **five-man/woman years** invested in theirs - and we think it's better. Anyone care to propose a standard?

Jack Rickard  
Editor

# BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS AND ON-LINE INFORMATION SERVICES - DECEMBER 1989

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
ADA Information Clearinghouse	(202)694-0215	Information on ADA Programming Language/Military Specs	Department of Defense	Washington, D.C.
ANARC BBS	(913)345-1978	World Radio/TV Handbook - Short Wave Freq Lists/Scheds.	Assoc. of North American Radio Clubs	KS
Applied Modeling Research RBBS	(919)541-1325	Environmental Protection Agency Atmospheric Models	William Peterson/EPA	Hurdle Mills, NC
Ashton-Tate Technical Support	(213)538-6196	dBase and Multimate Software Support System.	Ashton-Tate Corporation	Torrance, CA
AST Technical Services BBS	(714)852-1872	Superb support system for AST Computer Products	AST Research Inc.	Irvine, CA
AT&T Support BBS	(201)769-6397	Support for PC 6300 and Other AT&T PC Models	American Telephone/Telegraph PC Division	Plainfield, NJ
Audioophile Network	(818)988-0452	High-end Audio Components, Music, Video Reviews	Guy Hickey/Quatre Speakers	Van Nuys, CA
BBS Press Service	(913)478-9239	Home of INFOMAT Online Weekly PC News Magazine	Alan Bechtold/BBS Press Service	Topeka, KS
BellSouth's TUG Gateway	(404)594-3964	Transit Universal Gateway - Atlanta Journal-Constitution	BellSouth	Atlanta, GA
Best Friends BBS	(714)832-5902	DLX Multiline Chat/Match Social/Sexual	Ann and Joe Wiseman	Fountain Valley, CA
Big Peach BBS	(404)446-6650	Home of Automenu and Treeview Software	Marshall Magee/Magee Enterprises	Norcross, GA
Big Sky Telegraph	(406)683-7680	Educational Plans/Services to Rural Montana Schools	Montanna Rural Education Network	Dillon, MT
Boston Citinet	(617)439-5699	City of Boston Information Service - Advertising Supported	Advanced Videotext Systems	Boston, MA
Brown Bag Software BBS	(408)371-7654	Power Menu/ PC Outline Software Support	Brown Bag Software	Campbell, CA
ButtonWare BBS	(206)454-2629	PC-File dB / PC-Calc / PC-Type Software Support	Jim Button/ButtonWare	Bellevue, WA
C.A.R.L. Library Service	(303)830-1165	Citations to 2 Million Texts in Colorado Library System FREE	Colorado Alliance of Research Libraries	Denver, CO
Canada Remote Systems	(416)232-0442	Probably Canada's largest BBS/Online Information Service	Jud Newell	Toronto, Ontario
CatHouse BBS 206/2901	(805)395-0650	Multiline Support System for Wildcat BBS Software	Mustang Software	Bakersfield, CA
Cathouse II SuperSystem	(513)528-0505	TV Satellite Dish Info - Videocipher Descrambler Info	Seed City Engineering	Cincinnati, OH
Census Bureau Office Automation	(301)763-4576	Microcomputers and Office Automation	US Dept. of Commerce/News Frankel	Suitland, MD
Census Bureau Personnel Division	(301)763-4574	Employment Opportunities Within the Census Bureau	US Dept. of Commerce/News Frankel	Suitland, MD
Channel 1	(617)354-5776	Twenty-line New England PCBoard System	Brian Miller/Tess Heder	Cambridge, MA
Chicago SysLink	(312)622-4442	TRS 80 Support - Adult Chatline Function	George Matyaszek	Chicago, IL
Class Computer Fields	(317)359-5199	Online System for Classified Advertisements	Steve Edsall/Trader Newspaper	Indianapolis, IN
Clean Air BBS	(408)298-4277	Environmental Health/Cigarette Smoking Topics	American Lung Association/ Sheila Blash	San Jose, CA
Cleveland Freenet	(216)368-3888	Cleveland City Information/Ohio Governor's Office Online	Case Western University/AT&T/Ohio Bell	Cleveland, OH
Computer Business Services	(714)396-0014	Computer Columnist John C. Dvorak's office BBS	John C. Dvorak and Nick Anis Jr.	Diamond Bar, CA
Computing Canada Online	(416)497-5263	Adjunct to Excellent Canadian PC Newspaper	Computing Canada Newspaper	Willowdale, Ontario
Dante Project BBS	(603)643-6310	Commentary/Research on Dante's Divina Comedia	Dartmouth College	Hanover, NH
DataLink RBBS System	(214)394-7438	Weather Satellite Imaging, NOAA Satellite Tracking	Dallas Remote Imaging Group/Jeff Wallach	Carrollton, TX
Economic Bulletin Board	(202)377-0433	Economic Statistics/GNP/GDP/Employment, Trade Opportunities	US Department of Commerce	Springfield, VA
ELISA II	(202)697-3632	Export License Status Advisor - Technology Export Issues	Defense Technology Security Admin.	Washington, D.C.
Employ-Net	(303)871-9504	Employment Information - Help Wanted Ads- Career Management	David Hakala	Denver, CO
Energy Info Admin E-Publications	(202)586-8658	Variety of Petroleum/Coal/Electricity Energy Statistics	US Department of Energy	Washington, D.C.
Event Horizons	(503)777-1578	Digitized Graphics Image Library	Jim Maxey	Portland, OR
EXEC-PC	(414)964-5160	Largest BBS in US - 90 Lines - 70,000 files - 4 Gigabytes	Bob Mahoney	Shorewood, WI
Far West BBS	(604)381-4430	Large Western Canada Galadictomm Info System	Ren L'Ecuier	Victoria, BC
FCC Public Access Link	(301)725-1072	Equipment Authorization Status Advisory Service	Federal Communications Commission	Columbia, MD
Federal Deposit Insurance Corp.	(202)737-7264	General Microcomputer Information	R. Campbell and L. Rudolph	Washington, D.C.
Federal Job Information Center	(313)226-4423	Federal Job Opportunity Lists available online	US Office of Personnel Management	Detroit, MI
FEDLINK ALIX	(202)287-9656	Info on Federal Libraries -Excerpts Library of Congress News	Federal Library Information Network	Washington, D.C.
File Cabinet BBS	(215)678-9854	10-line PC Board System. 959 MB - 100 Conferences 14000 files	Jan Blair	Wyomissing, PA
Fishing Link	(608)526-9292	River/Lake Charts/Solar Tables/Fishing Info/Recipes	Jim Pratt	LaCrosse, WI
Fly-Fisher's Forum	(416)463-9090	Information on the Sport of Fly Fishing	Bryan Moir/Skyline Hotel Toronto	Markham, Ontario
FOG City BBS 125/10	(415)863-9697	Gay Community BBS - AIDS Info - Desktop Publishing - MACs	Bill Essex	San Francisco, CA
Forbin Project, The	(319)233-6157	Home of QModem SST Communications Software	John Friel III	Cedar Falls, IA
GAO Bulletin Board	(202)275-1050	Lotus/dBase/Word Perfect User Tips	US General Accounting Office/Sheryl Lee	Washington, D.C.

GLIB .....	(703)578-4542	Gay and Lesbian Information Bureau - 11 Lines - 9600 bps	Community Educational Svcs. Foundation	Arlington, VA
Greenpeace Environet .....	(415)861-6503	Ecological and Peace Issues - Disarmament/Toxics/Wildlife	Dick Dillman/Greenpeace .....	Houston, TX
GT PowerComm BBS .....	(713)772-2090	Home of GT Power Communications Software	Paul Meiners/P&M Software .....	Norcross, GA
Hay Locator .....	(317)494-6643	Database of Hay/Straw Suppliers and Buyers	Purdue Univ. Agricultural Computer Net .....	Philadelphia, PA
Hayes Advanced Systems Support .....	(800)US-HAYES	Eight Line Hayes Modem Support BBS	Mark Miller .....	Atlanta, GA
Hepnet/Satronics TBBS .....	(215)698-1905	Reptile and Amphibian Studies - Poison Snakes/Toads/Fish	Hayes Microcomputer Products .....	New York, NY
IBM Users Group Support BBS .....	(404)988-2790	IBM PC User Groups Database - Newsletter Exchange	IBM National Support Center .....	Hamilton, Ontario
Inbound/Outbound .....	(212)989-4675	Telephone Sales Publication Online Service	Harry Newton Publications .....	Washington, D.C.
Info-Source Canada .....	(416)574-1313	Online publications	Eric Feistmand .....	Hillsborough, OR
Information Resources Services .....	(202)535-7661	Fed Micro Procurement Rpts. - List of Banned Contractors	General Services Administration .....	Bellevue, WA
Intel Support BBS .....	(503)645-6275	Support for Intel PC Products - Inboard 386/AboveBoard 286	Intel Corporation PCEO Division .....	Arlington, VA
Investor's Online Data .....	(206)285-5359	Online Investment/Stock Market Information/Tech Analysis	Don Shepherdson .....	Roswell, GA
JAG-NET .....	(202)325-0748	Navy Judge Advocate General's Information Network	US Dept. of Navy / Chris Buechler .....	Glendale, AZ
JOBBS .....	(404)992-8937	Online Job Listings - 2186 Technical Pos. - 10,000 Corps.	Alpha Systems Inc./Bill Griffin .....	Twin Cities, MN
Lasergems Computer Hotline .....	(602)867-7258	Mail Order Laser Salvage/Supply - Laser Eavesdropping Device	Meredith Instrument Company .....	Anaheim Hills, CA
LUMINA .....	(612)626-2206	Libraries of Univ. of Minnesota Integrated Net Access/E1VT100	University of Minnesota .....	Raleigh, NC
MCI Consultants Support BBS .....	(800)873-5548	Long Distance Rates/Technical Advice for Comm Consultants	Curtis Abue/MCI Telecommunications Inc. ....	Redmond, WA
MEDCOM BBS Club .....	(800)445-4227	80 nodes - Games - Chat Lines - News Services	MEDCOMM Information Systems .....	Cherry Valley, NY
Micro Message Service .....	(919)779-6674	USA Today/Newsbytes/Boxoffice Magazines - 400+MB Downloads	Mike Stroud .....	Washington, D.C.
Micromim Technical Support BBS .....	(206)881-8119	Support for Popular R-Base Relational Data Base System	Micromim Corporation .....	NAS Norfolk, VA
Monu-CAD BBS .....	(607)264-3307	CAD Designs for Tombstones, Monuments, and Memorials	Jim Failveno/Monumental Computer App. ....	Huntsville, AL
NANCI BBS .....	(202)475-1973	Online Version of Naval Aviation News Magazine	Naval Aviation News/Cmdr. John Norton .....	Beltsville, MD
NARDAC BBS .....	(804)445-1627	Zenith Computer Support - List of Federal Micro User Groups	Navy Regional Data Automation Center .....	Arlington, VA
NASA SpaceLink .....	(205)895-0028	NASA Educational Affairs Div. - Flight Data/Space History	Marshall Space Flight Center .....	Galithersburg, MD
National Agricultural Library .....	(301)344-8510	Agricultural Info/Research Resources	US Department of Agriculture .....	Tampa, FL
National Genealogical BBS .....	(703)528-2612	Family History - Genealogical Research - Gravestone Haunting	National Genealogical Society .....	Washington, D.C.
National Inst.Science Technology .....	(301)948-5717	Micro Elect.Info Exchange - Virus Protection/Security Issues	National Inst. of Science and Technology ....	Ed Aborn .....
National Publishers Exchange .....	(813)989-1087	Headquarters for NPE Newsletter - Desktop Publishing	Dept. of Navy / Bill Walsh .....	Washington, D.C.
NAVWESA .....	(202)433-6639	Naval Weapons Engineering Support	Bob Hamilton .....	Carmel, CA
New Radio Star .....	(408)626-1618	Radio Station Morning Show Info for Program Directors	Darryl Peck/New York Mac Users' Group .....	New York, NY
New York Macintosh Users Group .....	(212)932-9513	Macintosh Downloads - MAC Street Journal/Newsletter	Nat. Institute for Standards/Technology .....	Boulder, CO
NIST ACTS .....	(303)494-4775	Automated Computer Telephone Service - Sync PC to NBS Time	National Oceanographic/Atmospheric Admin ..	Rockville, MD
NOAA Information Technology Exch .....	(301)770-0069	Microcomputer Applications and Recommendations	National Oceanographic/Atmospheric Admin ..	Boulder, CO
NOAA Solar .....	(303)497-5000	Solar Flare/Geomagnetic Data Online	Northrop Corp B2 Division .....	Pico Rivera, CA
Northrop Career Access .....	(213)938-5532	Northrop Aerospace Employment Opportunities - 7N2	The Mitchell Group .....	Laurel, MD
Numisnet .....	(301)498-8205	Collecting of Coins, Medals, and Exonumia	New York City Board of Education .....	New York, NY
NYCENET BBS .....	(212)769-0550	New York City Education Network	Office of Civilian Radiation/Waste Mgmt. ....	Washington, D.C.
OCRWM Infotink .....	(202)586-9359	Radioactive Waste Disposal/Hazardous Materials Handling	US Department of Education .....	Washington, D.C.
OERI BBS .....	(800)222-4922	Educational Statistics and Data - Performance Stats -	Dave Hughes .....	Colorado Springs, CO
Old Colorado City Communications .....	(719)632-2658	Political Discussions - Unix UUCP Public Access - Multiline	Stan Snyder/Online Store .....	Ventura, CA
Online Store DLX .....	(805)656-0379	Online Catalog of PC Hardware/Peripherals - Online Mailorder	Don Crago .....	Pooraka South Australia
Oracle PC .....	6108 260-6222	South Australian TBBS Multiline System	Fran and Norm Saunders .....	Colesville, MD
Osprey's Nest .....	(301)989-9036	Birdwatching, Bird feeding, Naturalis/Ecology Issues	Gary Funk .....	Fayetteville, AR
Personal Resource System .....	(501)442-8777	Online Publications - Excellent TBBS System	Michael Havelin .....	Takoma Park, MD
Photo*Life .....	(301)270-2638	Nature Photography	Univ. of Mass. Dept. of Physics/Astronomy ....	Amherst, MA
PHYSICS Forum BBS .....	(413)545-1959	Physics and Astronomical Sciences	Phil Katz/PKWare Incorporated .....	Glendale, WI
PKWare BBS .....	(414)352-7176	Home of PKARC and PKZIP File Compression Utilities	Popular Mechanics Magazine .....	New York, NY
Popular Mechanics Online BBS .....	(212)582-8369	Automotive, Home/Shop, Electronics/Photography, Science	Thomas Smith/DataStorm Technologies Inc. ....	Columbia, MO
ProComm Support BBS .....	(314)474-8477	Home of ProComm 2.4.2 and ProComm Plus Comm Prgrms	Public Brand Software .....	Indianapolis, IN
Public Brand Software BBS .....	(317)856-2087	Commercial Shareware Vendor	George Weiners .....	Chicago, IL
Publishers Information Svcs. ....	(312)342-6919	Xerox Ventura Publisher Support/Laser Printing/Scanning	Gernsback Publications .....	Farmingdale, NY
Radio Electronics BBS .....	(516)293-2283	Radio Electronics Magazine Online Adjunct		

# BOARDWATCH MAGAZINE

NATIONAL LIST OF ELECTRONIC BULLETIN BOARD SYSTEMS AND ON-LINE INFORMATION SERVICES - DECEMBER 1989

SERVICE	PHONE	DESCRIPTION	SPONSOR/SYSOP	LOCATION
Random Access Information Svc.	(503)761-8100	10500 IBM/MAC/AMIGA Files - 3000 MaxiPic Graphics	Janice Stevens	Portland, OR
RGB Computing	(519)824-3997	Multiline Information Service/PC Sales/Large File Selection.	Ronald Spencer - RGB Computing	Guelph, Ontario
Rose Media	(416)793-2780	Excellent Canadian PC Board System-Publications/Conferences	Vic Kass	Willowdale, Ontario
SALEMDUG BBS	(202)646-2887	Hazardous Materials/National Dam Watch/Emergency Info	Federal Emergency Management Agency	Washington, D.C.
Scenix Network	(213)372-2282	USA Today - BoxOffice Magazine - Local Real Estate	Connie Trantham/Sue Campbell	Manhattan Beach, CA
Science Resource Studies BBS	(202)634-1764	Federal R&D Budget - Technical Labor Market Statistics	National Science Foundation	Washington, D.C.
SEABOARD	(201)473-1991	Support system for ARC, SEADOG, and AXE software.	System Enhancement Associates	Wayne, NJ
Second Ring, The	(203)268-5315	Home of RBBS Software	Tom Mack	Trumbull, CT
Society for Technical Comm. BBS	(202)393-3557	STC Job Service, Freelance Registry - Technical Writers	Society for Technical Communication	Washington, D.C.
Software Plus BBS	(919)577-9831	Online Publications - Shareware Downloads - 500 MB	Tim Crawford/Software Plus Computers	Jacksonville, NC
Sound Advice BBS	(816)436-4516	Twenty Line PCBoard with 2 Gigabytes Storage - HST Modems	Roy Timberman	Gladstone, MO
Synargy	(617)769-5468	Turbo Basic/Turbo C/Quick C/Turbo Pascal/Assembly Language	Gerry Powers/Jim Boxmeyer	Norwood, MA
Talk 3 BBS	(602)482-1001	Reviews of Movies/Videos/ Film Industry Job Clearinghouse	Dave Kidder	Scottsdale, AZ
Talk Channel	(818)506-0620	DLX-Based Multiline Chat/Talk Service - Sexual Orientation	Gary Clarkson	North Hollywood, CA
TAXACOM	(716)896-7581	Botany, Herbaria, FLORA ONLINE Newsletter, Latin Translation	Clinton Herbarium, Buffalo Museum	Buffalo, NY
Taxonomic Reference File	(215)972-6759	Online Bacterial Name Database - ORACLE Door	BIOSIS Carol Lock/Keith Pittman	Philadelphia, PA
TBBS Net 104/23	(303)699-9248	Home of The Bread Board System (TBBS) BBS Software	Phil Becker/eSoft Inc.	Aurora, CO
Technotronics	(212)924-6899	LAN/PC Support and Technical Information	Chris Welber	New York, NY
Telegodzilla	(503)621-3746	Home of ZModem File Transfer Protocol/YModem/YAM	Chuck Forsberg/Omen Technology Incorp.	Portland, OR
Telnet Support BBS	(416)284-0682	Support Service for Telix Communications Software	Collin Sampaleanu/Exis Incorporated	West Hill, Ontario
Texas State Law Library BBS	(512)463-1371	Online Legal Periodicals and Citation Database	.....	San Antonio, TX
The Business BBS	(213)477-0408	Microsoft Windows Support	Jim Appleby	Los Angeles, CA
The Ledge PCBoard	(818)352-3620	Home of Textview Door for PC-Board Systems	Joseph Sheppard	Tujunga, CA
The LiveWire BBS	(609)235-5297	Online Magazine Subscription Orders	Richard Paquette	Mt. Laurel, NJ
The Other Ball	(818)358-6968	Adult Multiline Chat System - Games - Magazines - Downloads	Michael Allen	Monrovia, CA
The Well	(415)332-6106	Computer Graphics, Animation, and Sound Files	Tim McCormick and John Everman	Crawfordsville, IN
Thomas Business Systems	(407)395-7057	Very Popular Big BBS - Hourly Charges	Whole Earth Lctronic Link	Sausalito, CA
TOPS Support BBS	(415)769-8874	Used Computer/Peripheral Price List Online Database	Phil Thomas/Thomas Business Systems	Boca Raton, FL
United Nations BBS	(201)795-0733	Application Notes, Product Descriptions for TOPS LAN	Sun Microsystems	Alameda, CA
US Naval Observatory BES	(202)653-1079	UN Press Releases - Unixex News - Unibef	Dr. James Waldron	Hoboken, NJ
US Robotics - Sit UBU Sit	(312)982-5092	Time - Date - Sunrise - Sunset - Enter @TCO for Commands	US Department of Commerce US Naval Obser	Washington, D.C.
USA Today Distribution Service	(308)973-4222	Support for US Robotics HST 9600 bps Modems	US Robotics Corporation	Skokie, IL
USGS Quick Epicenter Determin.	(800)358-2663	Distribution Service for USA Today/Newsbytes/Boardwatch	Boardwatch Magazine	Littleton, CO
USNO Time of Day for Clocks	(202)653-0351	Earthquake Epicenter Data - Geomagnetism/7E2	US Geological Survey Earthquake Info Cnt	Denver, CO
UT Library Online Catalog	(512)471-9420	Xmits ASCII Time String - Sync Your PC to USNO Atomic Clock	US Dept. of Commerce US Naval Observ.	Washington, D.C.
VA Property Listing BBS	(602)241-2371	Online Library Card Catalog Listing 3.5 million entries	University of Texas at Austin	Austin, TX
Vacation Florida Database	(407)839-0333	List of VA held property foreclosures	Veterans Admin - Phoenix Regional Office	Phoenix, AZ
Vancouver ED-NET	(604)734-3282	Florida Tourism Information/Database of Campsites/Hotels	Richard and Barbara Kenney	Orlando, FL
Ward and Randy's CBBS	(312)545-8086	Educational Online Service	Vancouver Board of Education	Vancouver, BC
WeatherBank	(800)827-2727	World's First and Oldest Micro-based BBS - Since 2/16/78	Ward Christensen/Randy Suess	Chicago, IL
WeatherStar Pilot Briefing	(612)296-5426	Online Weather Forecasts for Any City - Download Radar Data	Steve Root/WeatherBrief Data Services	Salt Lake City, UT
Western Digital Tech Support	(714)756-8176	Pilot Data, Weather, Great Circle Route, Airport Information	Haynes Environmental Systems	Minneapolis, MN
XyQuest Support BBS	(508)667-5669	Hard Drive/Controller Installation and Config Data	Western Digital Corporation	.....
Ye Olde Bailey	(713)520-1569	Support for XyWrite Word Processor - Custom Keyboard Files	XyQuest Inc. - Christine Madsen	Bellerica, MA
		Legal Issues Regarding RBOC Relations with Info Services	Reginald Hirsch; Attorney	Houston, TX

# BOARDWATCH

## ONLINE INFORMATION SERVICE

**(303)973-4222**

Boardwatch Magazine has earned a reputation for providing the most accurate, concise, comprehensive information available on the emerging cottage industry of electronic bulletin boards and online information services. By popular request, we are now offering a multiline online service of our own, **Boardwatch Online Information Service**.

### **CURRENT ISSUE ONLINE**

The complete text of the current issue of **Boardwatch Magazine** is available for viewing online each month.

### **BACK ISSUES ARCHIVES/KEYWORD INDEX**

The complete text of back issues of **Boardwatch Magazine** beginning with the January 1988 issue are available for online viewing. Additionally, a keyword searchable index to back issues is available online. Simply enter a searchword and the system displays the article title, issue, and page number along with an ID code. Find the article in your printed issue or enter the ID code to call up the actual text of that particular issue online. Finding earlier stories on particular topics or products is now a snap.

### **BBS LIST DIALING DIRECTORIES AND COMMUNICATION SOFTWARE**

Pre-formatted dialing directories for communications shareware programs including Telix, ProComm Plus Test Drive, QModem SST, GT PowerComm, and Boyan. Simply download the dialing directory and place it in your terminal program subdirectory. The entire **Boardwatch BBS list** is available at the touch of a key. Dialing directories are updated each month. The **Boardwatch Online Information Service** will provide the latest versions of online communications software such as Telix, GT PowerComm, ProComm Plus Test Drive, QModem, and more. And finally, select BBS lists from various cities around the nation. Find out what's happening with electronic bulletin boards and online information services around the nation right from the source - **Boardwatch Magazine**

### **USA TODAY DECISIONLINE UPDATE**

Gannett New Media's popular electronic online summary of the days events. Updated each weekday morning with 18 topical categories including News, Sports, Weather, Business Law, Banking, Real Estate, Insurance, Marketing and Trends, Technology, Telecommunications, Energy, Health, Personal Investing, and more. The daily paper - online by 5:00 AM each business day.

### **NEWSBYTES MAGAZINE**

Award Winning weekly magazine monitoring the PC industry from reporting bureaus in San Francisco, Los Angeles, Atlanta, Toronto, London, Tokyo, Brussels, Sydney, and Washington D.C. The very latest in PC technology news, with categories for Apple, IBM, Unix, Business Applications, Telecommunications, Government and the Courts, Product Reviews, Boston Computer Exchange Closing Prices, and General Computer News.

### **INFOMAT MAGAZINE**

Alan Bechtold's **Infomat Magazine** is earning a reputation for timely, hard hitting news stories on PC technology and online communications. Includes Charles Bowen's **Networkers Journal** and columnist Dan Gutman. And now, we also carry Alan's excellent **Online Digital Music Review**. Monthly reviews of the latest CD recordings.

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# DENVER PC BOARDWATCH

LIST OF 115 AREA CODE 303 ELECTRONIC BULLETIN BOARD SYSTEMS AND ON-LINE INFORMATION SERVICES - DECEMBER 1989

TITLE	PHONE	DESCRIPTION	TYPE	MODEM	SOFT	CITY	OPERATOR
Adelante 104/93	443-8292	Central/Latin America News/Issues	IBM	2400	Opus	Boulder	Zahai Stewart
AmNet On-line 306/12	1-223-1297	Animal Rights Issues/Animal Rights Echo	IBM	2400	TBBS	Ft. Collins	James Cherry
APSNat	693-6737	Aurora Public Schools Network	Apple	2400	GBBS	Aurora	Columbia Middle School
Arvada 68K BBS	424-9831	Amiga/Macintosh/Atari ST/Motorola 68000	Amiga	2400	BBS-PC	Denver	Reid Bishop
Boardwatch Magazine 104/555	973-4222	Back Issue Index, Dialing Directories	IBM	2400	TBBS	Littleton	Ken Rickard
Boulder Amiga Users Group	494-4470	Amiga Support - Over 1000 Amiga Files	IBM	2400	QuickBBS	Boulder	Jan Fricklas
Byte Shop 104/311	794-5065	Jokes/Good Echowall/Downloads	IBM	96HST	QuickBBS	Littleton	Dan O'Neal
C.A.C.H.E.	745-4960	CO Apple & Compatible Home Enthusiasts	Apple	2400	GBBS	Denver	Gary Edwards
C.A.R.L. Denver	830-1546	Colorado Alliance of Research Libraries	Tandem	1200	Custom	Denver	N/A
C.D. Players	830-2199	Colorado Alliance of Research Libraries	Tandem	2400	Custom	Denver	N/A
Chatfield Armory	825-0419	Computer Discount On-line Store/Amiga	Amiga	2400	TBBS	Denver	Jay Tompkins
Chidvilas 104/207	972-9023	Firearms for Sale/Trade - Online Games	IBM	2400	QuickBBS	Littleton	Dave Bell
Club Micro/Compumatch 104/88	449-7399	Bhagwan Shree Rajneesh followers	IBM	96PEP	Opus	Louisville	Terry Mooster
CMOS-CO Mtn Operating Systems	973-8578	Adult Meeting Place/Shareware Downloads	IBM	96HST	TBBS	Littleton	Don Marquart
CO State Judicial BBS 104/420	322-4078	Amiga/IBM-Utilities-Pictures-Buy/Sell	IBM	96MICROC	QuickBBS	Denver	Kevin Trutt
College Board, The	831-1704	Colorado State Judicial ADP Department	IBM	2400	QuickBBS	Denver	Scott V. Hopla
Comm-Post, The 104/666	979-7299	Red Rocks College Bulletins/Schedules	IBM	1200	TOS	Littleton	Tom Nielson
Computer Consulting 104/318	534-4646	Astronomy -120+ MB of Files - Multiline	IBM	96HSTV32	TBBS	Denver	Brian Barte
Computer Linkage 104/444	973-1002	dBase Database Software Development	IBM	95Hayes	QuickBBS	Littleton	Jim Bucks
Control Systems 104/417	499-1022	Amiga/Atari/IBM/XT - Medical Information	IBM	2400	Opus	Boulder	Ron Kuseksi
CP/M SIG INC 104/372	458-6248	IBM/Compatibles Subscription Board	IBM	96MICROC	RBBS	Denver	Lupe Ramirez
Crypt, The	465-1313	Oldest User's Group in Area - CP/M - IBM	IBM	2400	Fido	Broomfield	Al Lundquist
Cyber-Zone, The 104/61	696-9084	Twenty Online Games - Adult Messages	IBM	2400	WWIV	Denver	Bill Bonic
D-Link 1 104/411	429-2208	Science Fiction	IBM	2400	QuickBBS	Denver	Jonathan Wood
Dark Crystal, The 104/421	936-2791	Golden Micro Computer Sales/Support	IBM	96HST	QuickBBS	Denver	Bob Wells
Denver Area R:BASE Users Group	654-1278	Role Playing Games	IBM	2400	QuickBBS	Denver	Steve Boyd
Denver Deaf-Net	422-2149	R:BASE Information PC Related Files	IBM	2400	QuickBBS	Lakewood	Paul Fullerton
Dinosaur Board 104/114	989-9245	Hearing Impaired/Computing	IBM	2400	QuickBBS	Lakewood	David Sheneman
Eagle's Nest 104/315	1-652-3595	TRS80 Support/16 Online Adventure Games	IBM	96HSTV32	TBBS	Niwot	Chris Anderson
Emerald City BBS 104/214	933-0701	Many Files and Echoes	IBM	9600	QuickBBS	Littleton	Ronald Olsen
EMPLOY-NET	427-1471	Electronics Discount World	IBM	2400	QuickBBS	Westminster	Daniel Osborn
Enterprise	871-9504	Employment Info - Career Management	IBM	2400	QuickBBS	Denver	David Hakala
eSoft TBBS Software Support	377-1005	Local Radio Freq List - Star Trek Theme	Apple	2400	Protee	Denver	Jeff Tensly
Fantasy Mtn D-Link IV 104/803	699-9248	The Bread Board System-LOGON/ANSI DEMO	IBM	96HST	TBBS	Aurora	Phil Becker
Flightstar Information Service	278-8369	Deaf and Handicapped Issues ASCII TTY	IBM	2400	QuickBBS	Golden	Steve Shockley
Four Wheeling BBS, The	790-4356	Used Aircraft For Sale Database/Bluebook	IBM	2400	Custom	Englewood	Mickey Russell
Fox Empire 306/16	469-4954	Jeeping / Camping / Outdoors	Atari	2400	Stadel	Broomfield	John Ferguson
Fred's BBS	1-484-4359	Online Simulation of Medieval Town	IBM	2400	QuickBBS	Fort Collins	Andrew Boardman
Free Information Exch. 104/89	233-1316	Online Chess - Adult Areas	IBM	2400	QuickBBS	Lakewood	Fred Schupner
Free Thought BBS 104/423	699-1516	Programming - Home and Garden	IBM	2400	Opus	Denver	Charles Frika
Front Range PC Users Group BBS	695-0654	Objectivism/Libertarian Views	IBM	2400	QuickBBS	Aurora	Bill Williams
FutureWave BBS 104/57	1-493-4094	Fort Collins Group - Computer Express	IBM	96HSTV32	Wildcat	Fort Collins	Tom Oppenheimer
Galaxy Express 999 104/215	440-7425	Games / C Language / MIDI	IBM	2400	Opus	Boulder	Bruce Arnold
Gay Community Fido 104/19	469-3221	Japanese Cartoon Animation-Messages	IBM	2400	QuickBBS	Broomfield	Witheld by Request
GDP Technologic BBS	795-1215	Messages / Downloads for Homosexuals	IBM	1200	QuickBBS	Littleton	Tom Gettys
Groto, The	673-9470	Amiga, Pascal - Ebert Personal Computers	IBM	2400	Wildcat	Lafayette	Vincent Veritas
HP Haven 104/312	694-9050	Traders/On-line Games / 5PM-7:30 AM	IBM	2400	TBBS	Aurora	Mark Willecke
HP-BBS 306/10	671-5976	Jokes, Amazing but True stories,	IBM	9600	TBBS	Westminster	Rob Diehl
JEFFCOM BBS	1-223-3719	Jefferson County Public Schools	IBM	1200	RBBS	Golden	Ron Dries
King's Market Bookshop 104/115	273-6951	Books, Writers, On-line Adventure Games	IBM	2400	TBBS	Boulder	Jim Burt
Kings Bench 104/615	665-6091	Compatible Computer Info Exchange	IBM	2400	Fido	Denver	Ralph Allison
L&L Support	377-6725	Primary GBBS Pro Software Support BBS	IBM	2400	RBBS	Arvada	Lance Taylor-Warren
Lakewood Department of Safety	420-3568	Police Sponsored - Law Enforcement Msgs	Apple	1200	RBBS	Wheatridge	Larry Scheidman
LaserWriting Desktop Service	987-7388	Laser Printing/Scanning/Linotronic 300	MAC	1200	RedRyder	Denver	Bill Wright

LDS Reading Room, The 104/513	343-1665	Latter Day Saints - The Mormons	IBM	2400	QuickBBS	Aurora	Don Bell
Lensman, The	979-8953	Science Fiction/Fantasy Fandom News/Info	IBM	2400	GT Power	Littleton	Grag Bratt
LES-COM-net	526-2046	Lesley College Comm Net - GBBS Multiline	Apple	2400	GBBS	Genesee	George Willett
Lodge, The 104/212	420-0305	Arvada Quick BBS Board	IBM	2400	QuickBBS	Arvada	Harold "Monty" Montrose
MACE 104/416	797-8090	Metro Area Computer Enthusiasts	IBM	1200	QuickBBS	Denver	Ken Zen
MICRO	752-2943	Mile High Computer Resource Organization	IBM	2400	QuickBBS	Westminster	Jim Kochmann
MicroLink B 104/108	972-9600	1 Gigabyte Files - USA Today - Multiline	IBM	96HSTV32	TBBS	Littleton	Girard Westenberg
MicroLink D 104/11	237-8575	Over 200 MB - Doesn't Break	IBM	96HST	TBBS	Lakewood	???
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New Age Bulletin Board, The	366-1106	Health, Ecology, Philosophy	IBM	1200	TBBS	Aurora	Hal/Fran Piser
NightFlyer 104/210	467-9199	Basic/dBase/Assembler/C Programming	IBM	2400	QuickBBS	Arvada	Marcel Madonna
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Quest, The	429-4617	USGS Earthquake Data 7E2	IBM	2400	QuickBBS	Denver	???
Quick Epicenter Determination	279-6374	Colorado Highway Department - Planning	VAX	300 7E2	???	???	Bruce Presgrave
R.A.B.B.I.T.	757-9509	Star Trek Theme - USS Tuktaki NCC-1799-B	IBM	1200	TBBS	Denver	Colorado Dept. Highways
Ready Room, The 104/424	329-8136	Vesta Technology/Denver Forth Int. Group	IBM	2400	QuickBBS	Denver	Jason Stock
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Regency Datasource 104/58	972-1222	Support for CoCo RiBBS Software	IBM	96Hayes	Opus	Littleton	Charlie Bass
RiBBS Support Hdqtrs. 104/54	343-6707	INFO NEEDED	IBM	2400	QuickBBS	Aurora	Ron Bihler
Rocky Mountain RBBS	750-2107	Multiline - INFOMAT - Chat areas - Games	IBM	1200	RBBS	Aurora	Steve Komreich
Rocky Mtn Info Exch 104/739	841-9570	Atari Support 5.4 MB XE 130	IBM	96HSTV32	TBBS	Parker	Larry Kayser
Ron and Shannons BBS	978-0298	Varied Topics: FidoNet, BinkleyTerm	Atari	2400	OASIS	Englewood	Ron/Shannon Sellers
Short Line 104/36	778-7312	The Arena On-line Games, Fantasy, AD&D	IBM	2400	Opus	Lakewood	Alan Applegate
SnarQuest V 104/317	973-0625	Christian BBS / Sound Doctrine Church	IBM	2400	QuickBBS	Littleton	Radford Walker
SnarQuest II 104/46	761-1634	NOAA Solar Flare Forecast / Advisory	IBM	96HST	QuickBBS	Englewood	Dax Davis
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Space Environment Service Cntr	497-5000	Info on Steamboat Springs Area	IBM	1200	PBBS	Boulder	US Dept of Commerce
Space Network	494-8446	Online Games/Graphics 120 MB	IBM	2400	TBBS	Boulder	Tom Meyer
Steamboat Information	1-879-6741	Colorado Ski Information	IBM	1200	TBBS	Steamboat Springs	???
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Weyr, The 104/211	429-2975	Current Events, Politics, Religion	IBM	96HST	Opus	Westminster	Ken Shimko
Wizardry 104/630	670-1416	US Bureau of Reclamation - Dept of Int.	IBM	96HST	QuickBBS	Evergreen	Marvin Cook
World Peace BBS 104/415	320-4822		IBM	2400	QuickBBS	Denver	Bucky Carr
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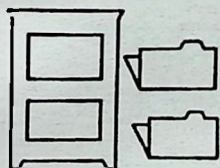
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## IN THIS ISSUE

<i>Dvorak's Guide to PC Telecommunications</i> .....	3
<i>Fast Erasable Optical Drive</i> .....	5
<i>Minitel Services Adds Stocks, Sports</i> .....	6
<i>Super Slim Laptop Hard Disk Due</i> .....	6
<i>Weight Calculator for CAD</i> .....	6
<i>Multi-line FAX Cards</i> .....	6
<i>V.32 Standard Extended to 14,400 bps</i> .....	6
<i>Motorola Pocket Cellular Phone</i> .....	6
<i>Tiny Poqet PC Laptop</i> .....	6
<i>Pacific Bell Drops Gateway Plans</i> .....	7
<i>Wildcat Pro-Pak Support Package</i> .....	7
<i>US Sprint Offers Free BBS for Telecom Consultants</i> .....	7
<i>Long Distance Profits Up</i> .....	8
<i>NeXT Adds 40 MB Hard Drive</i> .....	9
<i>Wildcat 2.1 Adds LAN Support</i> .....	9
<i>eSoft Ships Database Add-on</i> .....	9
<i>Earthquake Data Online</i> .....	10
<i>USA Today Sports Center offers Stats</i> .....	10
<i>Tombstone Information Service</i> .....	13
<i>Fly-Fishing Information Online</i> .....	14
<i>Coconet - Future of the BBS?</i> .....	14
<i>SUMMIT Offers Online Multitasking</i> .....	16
<i>QModem SST 4.1 Comm Program</i> .....	18
<i>Crosstalk for Windows</i> .....	19
<i>Electronic Info Services - Survival of the Specialized</i> .....	19
<i>National List</i> .....	25

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